VOICE OF THE DIABETIC

A SUPPORT AND INFORMATION NETWORK

The Diabetics Division of The National Federation of the Blind

Volume 6, No. 1 **Winter Edition** **Page 1**

Okay, problem, come with me. Let's walk together.

by Cristina Cequiel

Cristina Cequiel has experienced complications of diabetes, but refuses to consider herself a victim of the disease. She is positive and can see the sun in her life.

As an Argentinian member of the Diabetics Division of the National Federation of the Blind, I am happy to contribute my writing which contains excerpts from one of my articles that appeared in our magazine published by the Association for Patients with Renal Chronic Disease in Argentina (A.D.E.R.C.A.). Although this magazine is no longer being published due to lack of funding, I continue to serve as coordinator of public relations for our support group. Many of my published articles will appear in a book which I am in the process of writing. It is my hope that my book, as well as this article, will encourage others to *accept* their diabetes and to find *the sun* inside themselves in spite of the problems associated with the disease.

My diabetes was discovered when I was eleven years old. For the following nineteen years, until the age of thirty, I experienced many of the complications associated with being an insulin-dependent, juvenile-onset diabetic. I am blind in one eye and the vision in the other is severely impaired. I have experienced kidney failure and have had transplant surgery twice. The first transplant, in December 1981, of a kidney donated by my mother, failed. When I was thirty, in August 1982, I underwent transplant surgery the second time. I received a kidney and a pancreas. The second surgery was very successful. Since receiving the pancreas, I am no longer diabetic. I am delighted to report that both the kidney and pancreas are functioning well.

In the aforementioned article published in our magazine, I shared my experiences and thoughts by addressing two questions. The first question: Do I have problems? The second question: Am I a victim? I offer my experiences, thoughts, and some of my philosophy and insights to English-speaking people in the following translation and expansion of the excerpt of that article.

Do I have problems? Prior to transplant surgery, I was well acquainted with many complications that are inherent in diabetes, such as infections, loss of sight, etc. I endured several limitations. However, I am no longer diabetic. Do I still have problems? Yes, I still have problems. For example, I have infections which are associated with antirejection treatments. Because the body considers transplanted organs as intruders, these treatments are necessary so that my body will not reject the functioning donated organs. However, those same antirejection treatments diminish my own natural defenses and leave me subject to an additional problem of more infection. Yes, I am continuing to experience problems directly attributable to having HAD diabetes.

Am I a victim? When my diabetes was first diagnosed, I was eleven years old. It was then, when I was talking to God, that I told myself that I was not going to make people feel sorry for me. I didn't want anyone to talk about me saying, "Poor little girl." I didn't want pity. I wanted to be admired as a total person.

I didn't experience complications associated with diabetes until the age of twenty-three, when urinary tract infections began. I was a fairly well controlled young diabetic who did not seek pity or attention for my disease.

Among the many things that I ought to have settled in my head during those early years was an order of priorities, the first priority being *acceptance of my disease*. What did accepting my disease entail? Did it mean I had to accept that I was ill? Did it mean that I had to continue following a diet? Did it mean I had to add medications now that I was taking more small pills to control the urinary infections? Did it mean that I would have to make my own laboratory and clinic checks as well as make small changes in my insulin and/or diet? Yes, it was all this; but all this was not new for a juvenile onset diabetic. I had looked after my disease well enough since diagnosis. Yes, it was all this; but it was also much more, so much more.

Shortly after a bout with typhoid fever at age 23, my kidney disease presented me with another physical disorder, the first such upset since the earlier urinary tract infections. About the same time I began to experience the first complication of diabetes. That complication involved my vision. The consequences of the side effects would, in themselves, worsen and increase in number.

The fact is, the symptoms were indicating that I had to take better care of myself and that I had to strictly obey doctor's orders, etcetera, etcetera. But the "etcetera" was so great, so difficult, and so heavy that I began to wonder if it were possible to lay peace in one's spirit. In my philosophy of life, the mind needs to know there is a problem, whether the problem is present a day, a month or for life. To make it clear in your mind just say, "Okay problem, come with me. Let's walk together." Don't fight the problem. Tell yourself that you are going to be friends with it. In other words, accept the fact that you have a problem.

How does the spirit attain peace when we are traveling the "Kidney Way?" What more would be asked of me? And yet more? Poor Cris? Did I pity myself? Was I poor Cris?

During the early years, when my

(Continued on page 5)

Voice of the Diabetic is a national publication of the Diabetics Division of the National Federation of the Blind. It is read by those interested in all aspects of blindness and diabetes. We show diabetics that they have options regardless of the ramifications they may have had. We have a positive philosophy and know that positive attitudes are contagious!

News items, change of address notice and other magazine correspondence should be sent to:

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Partially sighted, really blind

by Catherine Horn Randall

Catherine Horn Randall, a leader of the NFB of Illinois, tells of the importance of understanding blindness and using alternative techniques.

(*Editor's Note:* I periodically have this article reprinted because of its popularity. Catherine Horn Randall serves as Alderman on the Jacksonville, Illinois City Council. She was elected to office in 1987.)

One rainy afternoon, a young mother stood across the street from Main Hall on the MacMurray College campus in Jacksonville, Illinois, watching the busy, laughing college co-eds come and go. She cried for her four-year-old daughter who might not have the opportunity to go to college or to lead a full life because she only had partial sight in her right eye. She was afraid and wondered about Cathy's future, and all she knew to do was to have Cathy evaluated by the professional staff of The Illinois Braille and Sight Saving School in Jacksonville.

The professionals told her that Cathy had so much sight that she wouldn't need to bother with braille. The bewildered young parents were grateful to the experts for their advice: who else could they turn to? The school didn't tell them that the National Federation of the Blind even existed. Cathy's parents took her home determined to enroll her in the sight saving program in Quincy, Illinois.

From this point on, I shall tell my own story. As I look back at the enormous implications to my life and to my education from being denied the opportunity to learn braille as a child, I am as angry and frustrated now as my mother was afraid for my future in 1951.

I happen to be an only child, and I like to think that I was constructively spoiled by my parents. My parents could not have been more supportive of me. If they had received commonsense guidance, I know I would have learned braille. Whatever I needed to help with my education, my parents enthusiastically provided. If only we had known that what we needed most was the National Federation of the Blind, braille, and cane travel skills. Unfortunately for me, we used the term "partially sighted" while I was growing up. I wasn't really blind because I had some sight, so I didn't think of myself as blind until I began losing my remaining sight in my late 20's.

I was a blind child and a blind college student who was trying to get along without either of the most important skills of blindness, namely braille and cane travel.

I took typing lessons when I was 10, and again in both junior and senior high. Typing, I feel, is another essential skill for blind and legally blind students.

A partially blind student who reads

(Continued on page 5)

Inside this issue

Okay, problem, come with me. Let's walk together. by Cristina Cequiel 1

Partially sighted, really blind by Catherine Horn Randall 2

National Federation of the Blind Day A proclamation by President Bush 2

Independent, home self-care dialysis possible for blind persons with kidney failure by Lois M. Schmidt, R.N., C.D.E. . 4

The National Federation of the Blind 7

Glycosylated hemoglobin by Ed Bryant 8

Scientists find way to cure laboratory rats of diabetes by Toronto Globe and Mail 8

Against all odds, she's on her own by Laura Eggers 8

A letter to the editor by Vina Manning 8

NFB leader receives award from the President 9

Clinical research: studying diabetes in the patient 9

Ask Dr. James by Ronald James, M.D. 10

A pocketful of independence by Royanne R. Hollins 10

Diabetes Mellitus and your feet by Gerald Robin, D.P.M. and Robert J. Tanenberg, M.D. 11

Foot Care by Neil M. Scheffler, D.P.M. 12

Getting a second opinion. Your choice facing elective surgery 13

Wound care centers offer bold new approach to healing by Michael West 13

The diabetic foot — the role of hyperbaric oxygen therapy by Herbert A. Ferrari, M.D., J.D. and Thomas W. Burns, M.D. 14

Access to personal computers for the blind: A review of speech and Braille software/hardware systems designed to permit blind persons to access the video display of an IBM Personal Computer (PC) by Curtis Chong and Steve Jacobson 15

Combination foods by Claire Hammer, R.D. 16

Recipe Corner 16

New book: Walking Alone and Marching Together by Floyd Matson 17

New diabetic technology lending library 18

What you always wanted to know but didn't know where to ask (Resource list) 18

Food for thought 19

Diabetics should take extra precautions when ill 20

National Federation of the Blind Day

THE WHITE HOUSE
Office of the Press Secretary

For Immediate Release November 15, 1990

NATIONAL FEDERATION OF THE BLIND DAY, 1990

by the President of the United States of America
A PROCLAMATION

Since its founding half a century ago, the National Federation of the Blind has been a leading advocate for Americans affected by severe visual loss. Its administrators, staff, and supporters know that persons who are blind possess not only the desire but also the ability to lead full, independent, and productive lives, and they have encouraged all Americans to recognize this fact as well.

Through an effective community outreach program, the Federation has been working to enhance the public image of blind Americans and to promote real equality of opportunity for these members of our society. This outreach program includes television and radio appearances by Federation members, public presentations, and the distribution of educational materials. In addition, the Federation produces monthly and quarterly publications that serve as a valuable source of news and information on issues affecting Americans with impaired eyesight.

If the United States is to remain a strong and prosperous country, one that is competitive in the rapidly changing global marketplace, we must utilize the talent, creativity, and skill of all our citizens. Helping more blind Americans to enter this country's social and economic mainstream is, therefore, not only a moral imperative but also a wise investment in our Nation's future. On July 26, I was pleased to sign into law the Americans with Disabilities Act of 1990. The world's first comprehensive declaration of equality for persons with disabilities, this legislation prohibits employers covered by the Act from discriminating against qualified applicants or employees on the basis of a disability; it guarantees persons with disabilities access to public accommodations, such as offices, hotels, and shopping centers; and it calls for improved access to transportation, State and local government services, and telecommunications as well. This legislation — like the efforts of the National Federation of the Blind — reflects our commitment to ensuring equality of opportunity for all Americans.

In recognition of the Federation and its outstanding work, the Congress, by House Joint Resolution 667, has designated November 16, 1990, as "National Federation of the Blind Day" and has authorized and requested the President to issue a proclamation in observance of that day.

NOW, THEREFORE, I, GEORGE BUSH, President of the United States of America, do hereby proclaim November 16, 1990, as National Federation of the Blind Day. I encourage all Americans to observe this day through appropriate programs and activities that reaffirm our appreciation of the rights, needs, and abilities of persons who are blind.

IN WITNESS WHEREOF, I have hereunto set my hand this fifteenth day of November, in the year of our Lord nineteen hundred and ninety, and of the Independence of the United States of America the two hundred and fifteenth.

GEORGE BUSH

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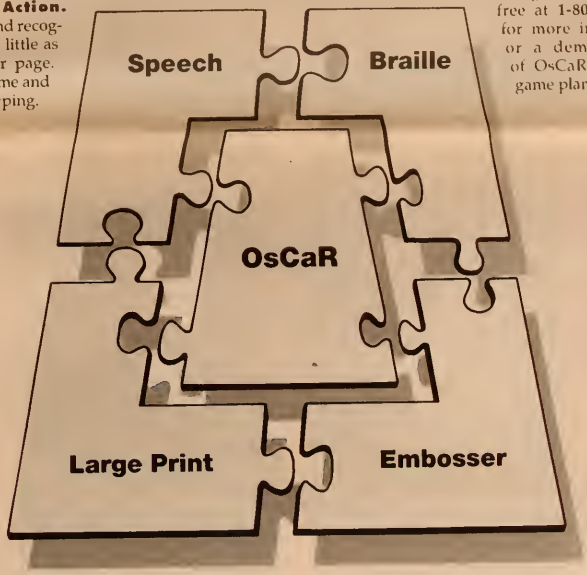

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Independent, home self-care dialysis possible for blind persons with kidney failure

by Lois M. Schmidt, R.N., C.N.N.

Lois Schmidt, R.N., C.N.N., is a certified nephrology nurse who works with the Peritoneal Dialysis Unit at Dialysis Clinics, Inc., Columbia, Missouri.

Kidney failure is a disease which occurs in about half of those people who have diabetes. It presents new challenges to the person who may at the same time be experiencing visual changes or blindness.

Preparation for dealing with kidney failure should include a thorough education program to adequately assess all the choices for treatment. Some patients who are eligible will seek a kidney transplant to replace their failing kidney function. Others will decide to use a dialysis therapy. Those who choose transplant usually also require a period of dialysis treatment prior to transplantation.

There are two basic types of dialysis therapies with many variations depending on the provider dialysis unit. Hemodialysis is usually done at a dialysis clinic by specially trained nursing staff. However, it may be done at home if the patient has a partner who can be taught to perform the treatment. Peritoneal dialysis, commonly called CAPD (continuous ambulatory peritoneal dialysis), is a self-care, home therapy.

Peritoneal dialysis works inside the body. It utilizes the peritoneal membrane, which forms a "sac" inside the abdominal cavity, to remove waste products and extra fluid from the body. This process is accomplished by allowing dialysis solution to flow into the peritoneal cavity by way of a permanent tubing called a catheter which is surgically placed through the abdominal wall. The solution remains in the abdomen for 4-8 hours while the person goes about his or her usual activities. At the end of this time, the dialysis solution is drained out and exchanged for fresh dialysis solution. This "exchange" is usually performed four times daily. Special training is provided to patients choosing CAPD to enable them to successfully use this therapy. All patients (including those without visual problems) are encouraged to have a family member or friend participate in their education sessions. Most people find it very reassuring to have a support person available if needed.

The exchange procedure of CAPD can be performed by a blind person using one of several assist devices available on the market today. This specialized equipment, as with all home dialysis supplies, can be obtained through dialysis units. For economic reasons some dialysis clinics make use of supplies from only one company and thus offer only one type of device. However, there are at least four different types of systems available that may be used by a patient with visual impairment and/or neuropathy (nerve damage) of the hands. Some of the devices feature an ultraviolet light which provides extra protection against infection. Others make use of large or recessed connections to help prevent contamination. Each system has some special features which may make it preferable for an individual patient's needs.

Another form of peritoneal dialysis is CCPD (continuous cycling peritoneal dialysis). This type of dialysis makes use of an automated cycler which is designed to operate while a person is asleep. The cycler is programmed to exchange the dialysis fluid at periodic intervals during the night. While this dialysis is more complicated than CAPD, it does allow daytime freedom from exchanges. Also, it may be the appropriate choice for a patient who requires the assistance of another person.

As with all things in life, peritoneal dialysis is not without its disadvantages. The most serious complication of this form of dialysis is infection of the peritoneal cavity. This infection can usually be treated successfully with antibiotics. However, great care must be taken by the patient to pay attention to cleanliness and to meticulous details, so as to avoid infections if at all possible.

There are also advantages to CAPD. One, which is particularly beneficial for the diabetic, is that insulin may be added to the dialysis solution rather than being given as an injection. Insulin administered in this way is absorbed and used by the body in a way which usually results in good blood sugar control. CAPD is a slow, continuous, gentle form of dialysis which provides a steady chemical fluid balance in the body. This can aid in maintaining normal blood pressure as well as providing a sense of well-being. Since CAPD is performed at home, the necessity of travel to a dialysis center three times a week is eliminated.

CAPD has proven to be an effective form of dialysis for persons with diabetes, including those with visual impairment and neuropathies. Extensive education is required prior to the decision for choice of dialysis therapy. Each individual must make his or her own decision based on careful evaluation of needs, motivation and family support, as well as emotional and physical capabilities. Those persons who are most successful with CAPD are those who are highly motivated to participate in their own health care.

(From the Editor. I have received reports that sometimes, when blind diabetics begin dialysis treatments, they aren't told about CAPD. Because of the diabetic's blindness, his/her physician doesn't always explain the different types of dialysis treatments. Unfortunately, it is, in some cases, assumed that because the patient is blind, he/she won't be able to use CAPD therapy.

On Friday, October 26, 1990, I visited Lois Schmidt, R.N., C.N.N., at Dialysis Clinics, Inc. (DCI) Peritoneal Dialysis Training Room. She showed and explained to me step by step what CAPD patients, blind and sighted, must do to successfully use this form of treatment. The training room contained a dummy doll with a CAPD catheter connected to its lower abdomen. I actually went through the process of hooking and unhooking the dialysis bags with and without solution for the CAPD exchange.

All CAPD patients must be careful not to touch and contaminate the ends of the catheter tubing, which could cause infection to the peritoneal cavity. Blind patients are trained how to use the ultraviolet germicidal exchange device. This instrument delivers a dose of ultraviolet light, which kills almost all bacteria on key components of the catheter and exchange system connections. Some dialysis units require that all patients, blind and sighted, use some sort of exchange device when connecting and disconnecting solution bags. Lois Schmidt said that, "When blind or visually impaired people become familiar with the system, and can do it well and efficiently, they're no more at risk than anyone else." She also said that when diabetes has advanced to the point where the patient has lost his/her sight, they often, from neuropathy, lose the feeling in their fingertips as well. It is imperative that blind patients have fairly good sensory ability in their fingers because they must be able to feel slots and/or openings to correctly use the ultraviolet germicidal exchange device. DCI provides several days of step-by-step training for CAPD patients.

Lois Schmidt said that some blind diabetics may have difficulty adding medication, such as insulin, to the bag if there is a problem with dexterity. The insulin syringe needle is inserted into a small port, which must be prepped with an anti-bacterial solution. There is a needle guide available which enables blind persons to independently do this, but it is imperative that neither the port nor the guide be contaminated. It doesn't take much bacteria introduced into the port area to cause infection. The peritoneal cavity is a sterile area. This cavity contains no white blood cells to fight infection. As soon as bacteria is introduced, it colonizes, multiplies, and very quickly creates an infection.

I am a blind diabetic who had no trouble with the CAPD exchange procedure. It is important to realize that some dialysis patients, whether they are blind or sighted, can use CAPD, and some cannot. It is well documented that there are alternative techniques which enable blind citizens to participate fully in mainstream society.)

If you or a friend would like to remember the Diabetics Division of the National Federation of the Blind in your will, you can do so by employing the following language:

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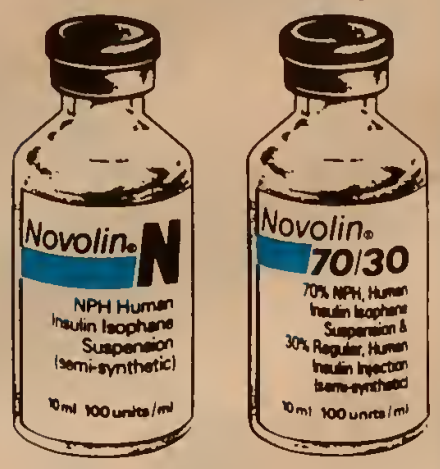

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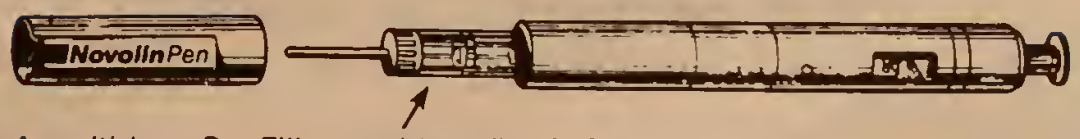

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Okay, problem

(Continued from page 1)

diabetes was a small, manageable problem, it occurred to me that I could lose my spirit to the disease. I admitted to my family, friends and to myself that even though my diabetes was small, it was possible to let the diabetes defeat me as a person. I made up my mind that I would deal with each complication the best I could. I would learn to deal with complications when they appeared. Yes, I would learn to cope with my diabetes. After all, there was nothing that I could do to rid myself of it. Until that time I hadn't *accepted* my disease.

When I was twenty-four, I lost the remaining vision in my right eye. The macula was burned by a negligent doctor who had applied the laser to my eye. Didn't I already have enough problems to deal with? And now this. Now, I had to deal with blindness. I had lost sight in one eye; I was angry. I said to myself, "No, Cris, this is not the way to face the problem. A complaining and defeated attitude will not be helpful to you." I asked myself, "Where is your fighting spirit, your courage, and your maturity? Where is the dignity to know how to accept with conformity the blows of destiny in life? No, Cris, your diabetes, kidney disease, and blindness are not the cause of your anger. What makes you angry is the undignified way you are making yourself feel. You feel like a victim, like a loser." All the anger, crying and fighting within made me believe *I am not going to win.*

Coping with diabetes and the complications can be difficult. Many times I wanted to rebel. For a few moments I accepted being a victim. But, this can be overcome. In living and dying, it is important to avoid what I call "negative functions." Negative functions, such as self-pity and accepting the role of being a victim, allow the disease to defeat the spirit within us. They block out the sun in our minds and prevent us from being happy and enjoying life. Such an attitude makes us slaves of diabetes. Negative functions can make us feel like a victim to all that surrounds us; playing the role of the victim is a self-defeating, vicious circle. We have to escape!

To overcome feeling like a victim and to escape from this self-defeating, victimizing, vicious circle, I said to myself, "Cris, it's in your hands and in your free will to make the needed changes. First, accept the fact that you are now blind and that the blindness is part of your diabetes which accompanies your life. You learned how to cope with diabetes as a child. Now, you must accept the disease and live with it. Accept this most recent complication as part of your disease and get on with the rest of your life. Then, you can see the positive aspects, the sun, in your life."

I repeated this to my conscience; it was *repetition* that made this thought take root in my mind. I suggested to myself that I change by accepting this new complication in my life. This attitude allowed me to accept my disease, with all of its problems. Yes, I admit that acceptance of my blindness was another struggle in my life; but there are always problems, and you just have to learn to accept whatever comes up and go from there. No, I am not a victim. Because I have accepted my disease and its complications, I am a winner.

Partially sighted

(Continued from page 2)

print and takes notes with Flair pens or markers and uses tapes is still greatly handicapped if he or she does not know braille.

I didn't have much confidence in myself in high school or college, and I think not having the skills of blindness was part of the reason, although I did not realize it at the time.

Eye strain was a constant problem for me in school. How wonderful and practical it would have been to make an easy transition from print work to braille when I used my eyes too much.

My father tutored me every night in math for years. My mother read to me so much that by my senior year in high school, she had damaged her vocal cords. I always loved school despite the hard work. I was feature editor for both my junior and senior high newspapers.

I earned a Bachelor of Arts degree from that same MacMurray College where my mother had despaired for my future, 19 years earlier.

College took me four and a half years and four straight summers to complete. I am now convinced that if I had had good braille skills, I might have been able to handle four courses a semester like everyone else instead of taking only three. I had a totally blind friend a year behind me in college who did take full course loads each semester and used braille.

Students, join and become active in the NFB. It is the greatest gift you can ever give yourself. Take the initiative to learn braille and cane travel. This may seem a tall order, but believe me, it is an essential one. You will find all the positive role models that you always needed in the NFB. You will learn that it is respectable to be blind.

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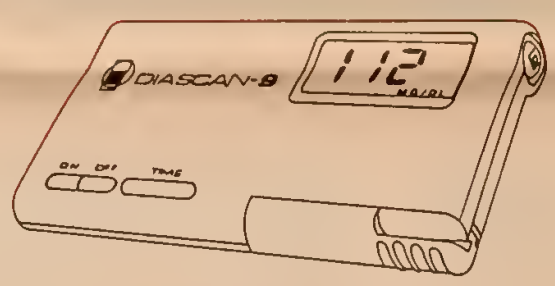

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The National Federation of the Blind

The National Federation of the Blind is the largest organization of the blind in the United States. Interested sighted persons also join. Founded in 1940, the Federation has grown to include more than ten percent of the nation's blind (over 50,000 members).

The Federation is organized in every state and has local chapters in almost every community of any size in the nation. Where there is no local chapter, there are members at large. Each year the National Convention of the Federation is attended by approximately 2,500 blind persons, which makes it the largest gathering of blind people in the history of the world and one which is growing each year.

The ultimate purpose of the National Federation of the Blind is the complete integration of the blind into society on a basis of equality. This objective involves the removal of legal, economic, and social discriminations; the education of the public to new concepts concerning blindness; and the achievement by all blind people of the right to exercise to the fullest their individual talents and capacities. It means the right of the blind to work along with their sighted neighbors in the professions, common callings, skilled trades, and regular occupations.

There are numerous governmental agencies and private charitable organizations and foundations providing services for blind people, but only the blind themselves (acting through their own organization) are able to speak for the blind. This is a basic concept of democracy.

The Newly Blind

Blindness knows no discrimination. Any child can be born blind. Any individual can become blind in childhood or later life. It is in the best interest of every individual to understand blindness and how to cope with its problems.

The newly blinded person faces a difficult adjustment. Studies have shown that only cancer is feared more than blindness. However, blindness does not need to be the tragedy which it is generally thought to be. One of the best medicines is to meet other blind people and learn of their jobs and the techniques they use in doing things without sight. Membership in the NFB provides this common meeting ground and, even more important, a sense of participation and restoration of confidence. Members in the NFB contact newly blinded persons to help them with problems of adjustment and orientation. Local chapters ordinarily hold monthly meetings, and state organizations usually meet annually. The National Convention is held each summer in a major American city and is the ultimate authority of the Federation, which establishes all policy.

The newly blinded person must also know where and how to get the training and services he or she needs. The National Federation of the Blind can work with the person to find and provide information on available services from governmental and private agencies, as well as facts about laws and regulations concerning the blind. More and more governmental agencies and private foundations are becoming responsive to the views and needs of the blind and are learning new concepts and attitudes about blindness. The future looks bright. There is an overwhelming feeling of goodwill and a wish to help on the part of the general public. Most important of all, the blind are moving forward to speak for themselves and take a hand in the management of their own affairs through their organization, the National Federation of the Blind.

Programs and Services

Public Education — By means of speeches, pamphlets, and radio and TV appearances, members of the NFB strive to educate the general public to the fact that the blind are normal individuals who can compete on the basis of equality with their sighted peers.

The ***Braille Monitor*** is a monthly publication of the NFB devoted to issues, news, and events which have special significance to the blind. It is published in Braille, in print, on record, and on cassette and is available without cost to the blind and sighted alike upon request to the National Office of the NFB.

Job Opportunities for the Blind — Blind persons seeking employment may use regular public and private employment agencies. However, because of widespread misconceptions about the abilities of the blind, special employment services may be more helpful. Blind people today work as lawyers, psychologists, machinists, farmers, and hairdressers; but the best estimates indicate that 70 percent of those who are able to work still do not have jobs or work only a few days a month in sheltered workshops. Many thoroughly capable blind persons have never had a job.

To respond to this critically high unemployment rate, the National Federation of the Blind, in cooperation with the United States Department of Labor, developed a program called *Job Opportunities for the Blind*. JOB helps qualified blind people who are looking for work find employers with job openings. JOB also helps employers, seeking competent workers and compliance with affirmative action requirements for hiring the handicapped, find truly qualified employees. JOB conducts educational seminars about blindness for employers and career-planning seminars for unemployed blind people.

Protection of Rights — There are barriers to full participation in society by the blind. The National Federation of the Blind stands ready to help blind people overcome these barriers when collective action is necessary to invoke protection of applicable state and federal laws in such areas as employment, education, housing, insurance, public transportation, and public facilities.

Social Security Benefits — Legally blind persons who have paid into the Social Security system may be eligible for Social Security Disability Insurance (SSDI) under the special rules which apply to the blind. Legally blind senior citizens considering early retirement should first learn if they might qualify for more benefits under SSDI. Blind persons who have little or no regular income or savings may qualify for monthly payments under the Supplemental Security Income (SSI) program. Again, there are special rules which apply only to the blind. Local Social Security offices have information and applications. The National Federation of the Blind can help with problems in understanding the regulations, incorrect denial of benefits, or related problems.

Rehabilitation — Every state has a public rehabilitation or vocational rehabilitation agency which provides training, counseling, and employment placement services to the blind. Sometimes the service is provided directly, and sometimes it is contracted out to private rehabilitation facilities. Some funds through the rehabilitation agency are usually available to students for college education or other post-secondary training. The NFB's National Office can provide information about where to apply for services in your area.

Library Services — Every state has free library services for those who, because of a physical or visual defect, cannot read ordinary print books. Books and magazines are available (on loan or free of charge) in Braille, in large print, and on cassette and record. Special cassette machines and record players to use in listening to the taped or recorded reading matter are also loaned without cost to blind library users. For details about where and how to apply for services in your area, you may contact the NFB or your local library.

Free Reading Matter Mail Privilege — Recorded, Braille, and large print reading matter (including library books and magazines) may be mailed to and from blind persons free of charge if "Free Matter for the Blind" is written or stamped on the envelope or package. Braille watches, white canes, or other special appliances for the blind are included in this privilege. The NFB will be happy to answer questions about the Free Reading Matter mail privilege.

Education of Blind Children — The passage of Public Law 94-142, the Education of All Handicapped Children Act, established certain rights and protections for blind children and their parents. Blind children are now entitled to a free public education in the "least -restrictive environment," and parents have the right to help plan their child's educational program. Contact the NFB for more information about the education of blind children, parent organizations, newsletters, etc. Also, the National Federation of the Blind publishes a magazine for parents of blind children. This publication provides information and insights into all aspects of raising blind children from infancy to adulthood. A free subscription is available to parents and other interested persons by writing to ***Future Reflections*** at the NFB National Office.

Scholarships — Blind students can take advantage of the same scholarship programs that are available to sighted students and should be encouraged to do so. However, there are also scholarships which are only available to blind students. The National Federation of the Blind, for example, awards over $70,000 a year in scholarships to worthy blind students. Contact the NFB for further details about these and other special scholarships for the blind.

Products and Aids — Technology has made many useful products available to the blind. Some aids make daily life easier (for example, the Braille watch), while others have opened up more employment opportunities for the blind (for example, talking computers). The NFB can supply information about local and national resources regarding products and technology for the blind.

For more information about any of the above programs and services, contact us at: National Federation of the Blind, 1800 Johnson St., Baltimore, MD 21230; phone toll-free: 1-800-638-7518, or in Maryland phone: (301) 659-9314.

Glycosylated hemoglobin

by Ed Bryant

Ed Bryant, Editor, *Voice of the Diabetic* explains the importance of keeping blood sugar levels under control.

A glycosylated hemoglobin, or hemoglobin AIC, test tells you what your average blood sugar level has been for the last two or three months. Hemoglobin is a protein inside red blood cells which carries oxygen to the body tissues. Sugar (glucose) in the blood stream can freely pass through the membrane of the red blood cell, where it ties onto the hemoglobin. To the sugar stuck on it, hemoglobin is like superglue because it doesn't loosen its grasp. The amount of sugar stuck onto hemoglobin depends on how high the average blood sugar is.

Each red blood cell lives about three months, then it dies and breaks up, and is replaced by new ones. If you draw a blood sample you will get old and new blood cells. The amount of sugar stuck to these cells can tell you exactly what the average blood sugar has been.

Everybody, whether diabetic or not, makes glycosylated hemoglobin. People without diabetes normally have glycosylated hemoglobin between four and six percent, which represents glucose levels of 80 mg/dl through 120 mg/dl. If you have diabetes, as much as 15 percent to 20 percent of your hemoglobin could have sugar on it. For every one percent that goes up, the average blood sugar goes up about 30. For example, a hemoglobin AIC of six percent represents an average blood sugar of about 120 mg/dl. If it goes up to seven, then the blood sugar is about 150 mg/dl; and so forth.

Since we diabetics are human, there will be an occasional slip in our eating habits. There may be times when we eat some candy, a piece of cake, or stuff ourselves at a scrumptious meal. We should always strive to do the right thing because it will mean better health. But if, on rare occasions, you go off the deep end and indulge in a too sweet treat — don't be overly concerned. If the no-no is done infrequently, there should be no adverse side effects.

You can also help the situation by doing extra exercise and/or taking a little extra regular insulin before indulging. If you do not alter your insulin dosages yourself, then check with your health care team for advice. Again, strive for perfection and don't lose sleep over an occasional blunder.

I am an insulin-dependent diabetic, and the following hemoglobin AIC blood tests on myself are pretty good. Yet, I occasionally have a small piece of cake or a small scoop of ice cream.

Date of Test	Hemoglobin AIC Level	Average Blood Sugar Level
Dec. 28, '89	4.6	92
Feb. 28, '90	5.0	100
May 2, '90	5.6	112
June 27, '90	4.8	96
Aug. 29, '90	5.7	114
Oct. 31, '90	5.5	110

The glycosylated hemoglobin (or hemoglobin AIC test) can be valuable for all diabetics. All of us can better control our diabetes.

Scientists find way to cure laboratory rats of diabetes

By Toronto Globe and Mail

Laboratory rats have been cured of diabetes with transplants of insulin-producing cells into their thymus glands.

In a study to be published today in the journal *Science,* researchers at the University of Pennsylvania Medical Center report that their findings offer hope for treating the illness in humans.

At the same time, they cautioned that what works in rats may not work in humans.

Some of the rats have been producing their own insulin for 17 months since receiving the transplanted cells, said Andrew Posselt, a medical graduate student who was in charge of the research.

Insulin is a hormone that regulates blood levels of glucose, a sugar that each cell in the body needs for energy. In healthy people, insulin is produced in the pancreas by groups of cells called the islets of Langerhans. In diabetics, some or all of these islets have been destroyed.

(Continued on page 10)

Against all odds, she's on her own

by Laura Eggers

From the Editor: *When I received this article about Vi Manning, I was impressed because the author explained that Ms. Manning is an independent blind person. She is active and involved in the mainstream of society.*

The National Federation of the Blind, with more than 50,000 members, knows that blindness is not the tragedy that it is often perceived to be. With proper training and opportunity, blind persons can and do lead full productive lives.

On Thursday, October 18, 1990, I telephoned Vi Manning to determine if she was as independent as the newspaper article stated. Ms. Manning is a delightful person and is as independent and active as anyone, sighted or blind.

Vi Manning is 67 years old and she plays bingo every Tuesday night at the Elks Lodge and every Monday and Wednesday when bingo is scheduled at the Roseburg Senior Center in Roseburg, Oregon. In fact, she has missed only three bingo games since September 1986 and that was because she was in the hospital.

So what, you say? Lots of other ladies her age are bingo fans.

But not many are blind, diabetic and have only one hand.

Vi has been blind since she was a child and has been a diabetic for 22 years, four of which she has been insulin-dependent. For a blind person, this is serious. She has to fill a syringe with insulin each day and give herself an injection. She does this with a special holder, necessary because she has been without the lower half of her left arm since she was 4 years old.

She lives alone, does her own laundry and housework, climbs 41 stairs to get in and out of her house when she goes on errands or takes a walk, using only a white-tipped cane to move around on Roseburg's streets. All unassisted.

Last week she canned cherries and made a batch of plum jelly in her kitchen.

This remarkable woman types her own letters on an electric Smith-Corona typewriter, sews, and "reads" talking books. She also has talking scales, a talking watch, a talking calculator and a talking clock to assist her in independent living.

Except for those "helpers" she lives her life just as any other active 67-year-old and she appreciates being treated that way.

She credits that streak of independence to the way she was treated by her parents.

Vi was born Vina Violet Baldwin on a 40-acre farm in Camas Valley in 1923. Knowing her today you might have a hard time visualizing her as she describes herself, "once a very shy person." Today she is a vivacious, gregarious person who is an inspiration to all those around her.

When Vi was 4 years old, she and her sister Alice, 3, mistook a blasting cap their father, Ray, was using to dynamite stumps from a field, for an empty cartridge. They had previously made whistles from the empty brass cartridges left behind by hunters. The ones they found that day, Nov. 1, 1927, were filled with gun powder. They couldn't dig it out, so they decided to burn it out.

Vi got a match and with her left hand struck it on a metal pipe. Alice ran to the front gate as she always did when her father lit blasting caps. As Vi touched the match to the powder it exploded, ripping off her left arm just below the elbow and damaging her eyes. Doctors were able to save what remained of the arm. They were unable to save the sight in the left eye and eventually she lost the vision in her right eye as a result of the explosion.

"My parents were wonderful," Vi reflects. "I had the best support group in my parents and in my brothers and sisters. My father did not baby me."

She said her mother, Nina, would worry about her using the paring knife when she was preparing vegetables and would say, "She'll cut herself!" Her father would reply: "Then she'll learn quickly how to use the knife."

She said she is thankful that she was treated the same as everyone else in the family. "My father taught me, 'There are going to be some things that you cannot do, some things you'll need help doing. Make these as few as possible.' And that is what I did," she said.

Even her schoolmates were positive, she recalls. This made it easier for her to continue learning and working. The only time she had any self doubts was as a teenager. "I experienced a period of time when I be-

(Continued on page 15)

A letter to the editor

Roseburg, Oregon
October 30, 1990

Voice of the Diabetic
Ed Bryant, Editor
Columbia, MO

Dear Friend,

Yesterday I received the fall edition of the **Voice of the Diabetic** and learned many things I had not been informed of concerning diabetes. I find the magazine very helpful and interesting. I sincerely hope it will be continued for many years.

Thank you,
Mrs. Vina Manning, "totally blind and with loss of left hand and wrist."

NFB leader receives award from the President

Dr. Kenneth Jernigan, Executive Director, National Federation of the Blind, receives the Distinguished Service Award of the President of the United States for "encouraging and promoting the employment of people with disabilities."

(*Note:* This article appeared September, 1990 in the ***Braille Monitor***, a national magazine published by the National Federation of the Blind.)

From the Associate Editor: Of the many highpoints and surprises of the fiftieth anniversary convention of the National Federation of the Blind in Dallas one of the most noteworthy was the appearance on Thursday morning, July 5, of Justin Dart, Jr., Chairman of the President's Committee on Employment of People With Disabilities. Mr. Dart, former commissioner of the Rehabilitation Services Administration and one of the most prominent national leaders in the disability field, came to make a presentation from the President of the United States. He spoke as follows:

I am very proud to be here today with so many great soldiers in the struggle for justice. I congratulate you — each one of you — on fifty years of contributions to the quality of human being. And I congratulate each one of you who has worked and sacrificed over the years to bring the Americans with Disabilities Act to the threshold of victory. I congratulate you on the equal accommodations amendment that considerably strengthens ADA. And I congratulate you on your advocacy for justice in the Air Carrier Act. You are the true patriots of the twentieth century.

It is my honor now to recognize the accomplishments of one of the great American pioneers of the twentieth century. It would be ludicrous for me to read to this gathering the resume of Dr. Kenneth Jernigan. But I do want to give you some personal observations. Most of the prominent people in our society are famous principally for being famous. They hold political, commercial, sports, entertainment, or mass media positions which make them automatically famous whether or not they make lasting, positive contributions to the culture. Too many of them play stereotyped roles with strained conformity and calculated flamboyant pandering to prejudice and fad. The person we honor today is different, because he has created in human culture a positive quality that was not there before — because the monuments to his life will live and will multiply long after the buildings of Donald Trump and the pyramids of the pharaohs have turned to dust.

He has created new, independence-oriented approaches to the field of rehabilitation. He has been a great pioneer organizer and leader of the National Federation of the Blind. His leadership of NFB has given impetus and direction to the movement to emancipate people with all disabilities who form the world's most oppressed, isolated, unemployed, impoverished, and dependent minority. Instead of using us (his followers) to make a place for himself in the hierarchy of the status quo, he has led us with the extraordinary intellectual and political courage and dedication to principle that is necessary truly to represent *our* interests. He is a profound philosopher and a uniquely articulate communicator who has given us revolutionary concepts that liberate and empower. He has taught us that blindness (that disability) is a characteristic of the human condition which is well within the range of the normal. He has taught us that people with blindness — like all people — have not only a right but also a responsibility to be fully equal, fully productive participants in the mainstream of our culture. He has taught us that equality and productivity cannot be handed down by paternalistic authority but can only be gained as we who have disabilities speak for ourselves and empower ourselves to participate fully in the decisions that control our destinies. And he has taught us that our nation and every citizen has a primary responsibility to create a society in which full equality and full productivity are not only rights but realities. He has consistently followed eloquence with effective action, with promises kept, administration accomplished, bills paid and battles won. His contributions will live as long as human culture exists. They will live in the lives of individuals with blindness and with other disabilities who have been liberated from the bondage of prejudice and paternalism. They will live in the lives of all human beings, whose quality of life will be forever enriched.

On behalf of President George Bush it is my very great honor now to present to Dr. Kenneth Jernigan the Distinguished Service Award of the President of the United States.

At the conclusion of his remarks Mr. Dart gave Dr. Jernigan an engraved plaque signed by President George Bush. The plaque reads: "The President of the United States cites with pleasure Kenneth Jernigan for distinguished service in encouraging and promoting the employment of people with disabilities. — July 5, 1990, George Bush."

For the difficult to manage patient...

Diabetic Program at Cumberland Hospital for Children and Adolescents

Cumberland's program specializes in those young people (ages 2–22) whose diabetes cannot be controlled because of behavioral problems. The typical patient stays in the hospital for approximately 30 days and receives a comprehensive treatment for medical and behavioral problems.

When the 12 months prior to admission to Cumberland was compared to the 12 months after discharge: (N-54)

- days hospitalized decreased 50%
- episodes of diabetic ketoacidosis decreased 66%
- hypoglycemic episodes necessitating emergency room treatment decreased 90.9%
- School attendance (school days) increased 60%

For more information on Cumberland's diabetic program, call the information office of the hospital at 1-800-368-3472.

C U M B E R L A N D

A Hospital for Children and Adolescents

Clinical research: studying diabetes in the patient

Before any new medical advance reaches the patient, it must undergo scrutiny and rigorous testing. One of the final steps of this evaluation process is a carefully monitored study carried out with patients. In this way, the clinician gains first-hand understanding of how a new drug, surgical procedure, dietary control, or other treatment method affects the course of a disease—and what role other factors such as heredity and enviornment may play in the disease process. This is known as clinical research. At the Eye Research Institute, several studies have been targeting diabetes and its effects on the eye. The following describes the recent clinical research programs.

Early treatment study

Researchers at the Eye Research Institute, in conjunction with 22 other medical research centers across the country, recently completed work on a major study of diabetic retinopathy that has provided new insights into the treatment of diabetic eye disease. The Early Treatment Diabetic Retinopathy Study (ETDRS) began in 1979, with funding from the National Eye Institute of the National Institutes of Health, and involved nearly 4,000 participating patients. Results were announced at the Annual Meeting of the American Academy of Ophthalmology meeting held in New Orleans at the end of October, 1989.

The ETDRS examined the effectiveness of various treatments and their timing in the course of diabetic retinopathy. One eye of participating patients was randomly assigned to a laser treatment regimen such as focal (if needed), or scatter (mild or full). In

(Continued on page 15)

Ask Dr. James

by Ronald James, M.D.

Ronald James, M.D., long-term insulin-dependent diabetic, directs Midwest Diabetes Treatment Center, Columbia, Mo. Dr. James is also the Medical Director of the Missouri Diabetic Children's Camp, Inc.

(**Note:** If you have any questions for Dr. James, please send them to the editor. The only questions Dr. James will be able to answer are the ones used in his column.)

Do you have a recommendation for something economically priced that will alleviate an insulin reaction?

Yes. Although there are many very good commercially available products such as glucose tablets and concentrated glucose gel preparations for the treatment of insulin reactions, these are somewhat expensive. When cost is a concern, I recommend the use of table sugar (sucrose). 35mm film containers will hold approximately 25 grams of table sugar. This is an appropriate amount for treating most adults having an insulin reaction. The film containers can usually be obtained free from photography supply stores and sugar can be purchased for a reasonable price at one's local grocery store. One pound of sugar which costs approximately $.40 is enough to treat approximately eighteen insulin reactions. Thus the cost is about $.02 or $.03 per reaction.

I have heard that fructose is actually sugar. If this is true, why do retail outlets promote it as an artificial sweetener? What other sweeteners fall into this category? If my diabetes is in good control, can I take it without raising my blood sugar too much?

Yes, it is true that fructose is actually a sugar. Several other sugars are also used in artificial sweeteners. These include lactose, sorbitol, and glucose (dextrose). Although some of these such as fructose require metabolism to glucose in order to raise the blood sugar, this occurs more slowly than it does in the case of glucose or table sugar. Thus, they have less of a blood glucose raising effect. It is for this reason that these products are on the market. Even if your diabetes is under good control these may have an effect on the blood sugar and possibly raise it too much. There are differences of opinion among physicians as to whether they allow their patients to use these caloric artificial sweeteners. Although I do not recommend them, one should check with his/her personal physician with regard to his/her preference.

What is the difference between hypoglycemia and diabetes? Does this difference affect the functions of the pancreas?

Hypoglycemia is the condition of low blood glucose while diabetes is a group of complex conditions in which the blood glucose is usually too high. In diabetes, the pancreas produces inadequate amounts of insulin, or, in some cases, no insulin. Hypoglycemia may be caused by over-production or inappropriate production of insulin by the pancreas. Of course, there are causes of hypoglycemia other than problems with the pancreas.

A pocketful of independence

by Royanne R. Hollins

Royanne R. Hollins has found, through the support of role models who have "been there", that she can remain independent after sight loss.

A pocketful of independence. This is something that we all strive for in our lives.

Many people take independence for granted. They go on day to day, living their lives on "auto pilot". They get up with the alarm in the morning, take their shower, eat breakfast, hop in their car, drive to work, enter the workplace and perform their job duties without a major struggle. Then, later the same day, they leave their workplace, hop in their car once more, and drive home to a relaxing evening with their families. They eat their family meal together, listen to their children tell stories about what happened at school, help with homework, and once their children are in bed give their spouse special attention before retiring for the night. This lifestyle repeats itself all over the nation and the world.

What happens when some or all of that independence is suddenly taken away? Speaking from personal experience, I can tell you it is not easy to lose *any* of your independence. As an insulin-dependent diabetic for 27 years, I was faced with the diagnosis of proliferative diabetic retinopathy. Within six months of the diagnosis I underwent my first laser treatment. Within 15 months of my first laser treatment I underwent a vitrectomy of the left eye. Of course, between the first laser treatment and the vitrectomy there were numerous laser treatments to both eyes. After still more laser treatments, 31 months from the vitrectomy, I was certified legally blind. Wow! That certification really put a "damper" on my life, my lifestyle and my thoughts of the future.

After being certified legally blind, I had some major decisions and changes to make. First and foremost I lost my driver's license and could no longer just "hop in my car" and take off on a whim to wherever I was led or had a desire to go. This has been a major adjustment.

Secondly, I was struggling with the vision I had left in that I had not yet learned of large print items and special tools I could use to help me perform my job duties as well as maintain from day to day doing simple things, such as fill my insulin pump, read the paper, see what time it was, etc. I was frustrated in that I never knew from day to day just how much functional vision I would have for that particular day.

Thirdly, I had personal goals, one of which was to study law and eventually practice here in California. Losing "reading" vision was making it harder and harder to work, let alone to complete my law studies in the evening after a hard day's work.

At first, friends and family were very supportive in that they all volunteered to take me anywhere I needed to go whenever I needed their help to get there. After a while it got "old" for them to hear me call and ask for a ride somewhere. My husband had patience for a period of time but eventually resentment creeped in after I had asked him to stop what he was doing to get me to a meeting on time (which also involved his coming back to take me home again within the next 90 minutes or so). I know this was a great burden on him as well as my family and friends. It was making me feel I was a major burden to everyone around me. I needed some help and guidance to cope with these feelings of guilt, inadequacies and hopelessness once and for all.

At the time of my certification of legal blindness, I had contacted our local Low Vision Clinic. I was given personal instruction and education as to what was available in the way of ser-

(Continued to page 11)

Scientists find way

(Continued from page 8)

In theory, at least, the illness should be curable if functioning islets can be transplanted into a diabetic.

Such experimental transplants are in fact under way at numerous medical centers. Islets are injected into a vein leading to the liver, where they start to produce insulin.

The end result, however, is not always encouraging. The transplanted cells eventually are destroyed by the immune system. Immune-suppressing, antirejection drugs can prolong the life of the transplanted cells, but these medications have serious side effects and leave a patient open to infection.

The University of Pennsylvania researchers seem to have overcome the problems that plagued other transplants by injecting the islets directly into the thymus gland, rather than letting them lodge in the liver.

Posselt added that this technique seems to trick the immune system into not attacking the transplanted islet. He said the immune system's T-cells grow in the thymus gland and mature there before they are sent out into the body to identify foreign substances for attack by other immune cells.

The fact that the T-cells mature in the presence of the islets means the islets get used to them and do not recognize them as foreign substances.

"We think that the T-cells can be tricked into thinking that the foreign tissue is actually part of its own body and the immune system will not attack it," he said.

Posselt noted that the rats needed only one dose of an immunosuppressive drug in the initial stage of the transplant.

(*Note:* This article appeared in the September 14, 1990 *Examiner*, Independence, Mo.)

(Continued from page 10)

vices, products and education. I learned that something as simple as a piece of yellow cellophane paper held over a page with blue print would make that blue print suddenly appear. Used in conjunction with a magnifying lens I would be able to witness those words appear like magic. My employer was kind enough to provide LP-DOS (a large print DOS program for my computer at work) allowing me to work without major frustration on the litigation support matters at the office. I am hoping they will eventually provide a scanner and voice synthesizer as well. I am fortunate they are supportive and understanding of my special needs to perform my job successfully.

As a part of the Low Vision Clinic services, I received personal guidance on some coping techniques. I met with a counselor who has been blind since birth. The best counselor to have in any situation is someone who has been there already. He knew firsthand much of what I was going to be discussing with him. He did not have the personal experience of long-term diabetes and its ramifications, but he knew blindness. He gave some wonderful pointers that made all the difference in the world to my new self-image (which was chasms away from the "old" me) and gave me encouragement. He convinced me that, even with the loss of sight, I could still accomplish those goals I had originally set for myself.

I had written a law book that needed to be updated yearly. The next update was coming up and I actually felt there would not be any way I could accomplish that project. But his "Oh, yes you can!" and the enthusiasm in his voice really encouraged me to give it a try. Try I did. Complete the update I did, and I felt truly accomplished by the end of that particular three-month stretch of time.

Subsequent to the "certification" I traveled from Sacramento to Chicago after getting a "crash course" in mobility training and learning how to get around with my white cane, as my nighttime vision is non-existent. Pulling out my white cane was a major hurdle for me. I felt self-conscious and a little embarrassed. As I learned that my white cane is a "tool" for my exclusive use and became less self-conscious about it, it became my "Pal". Now my "Pal" is with me always. I am currently in an extensive mobility training program to pick up all of the skills that had been left out of the "crash course" for the lack of time. I even learned our local public transportation system. I know how to get myself to and from work and doctor appointments without having to ask for any more "favors". Of course, I do prefer the luxury ride from family and friends, but the public transportation system is there whenever I need it as well.

My co-employees are still willing to take me back and forth to work but the additional confidence I have gained in knowing I can get to and from work, independently of relying on someone's graciousness, is freedom all its own. Truly, a pocketful of independence.

At the outset of my diagnosis I had been introduced to the Diabetics Division of the National Federation of the Blind. The people in this organization were so very positive and uplifting that I found it difficult and almost impossible to be depressed and saddened by my lot in life. Having an opportunity to work with the Diabetics Division of the National Federation of the Blind allowed me to network with others who have gone through or are going through the very same thing. It is helpful to have commonality with others and the National Federation of the Blind did this for me.

I have begun learning Braille. Learning Braille while there is vision remaining is a good idea. Even while learning Braille, I attempt to "look" at the page and see those dots to no avail. Braille is a whole new world of discovery. This too gives me peace of mind as well as the knowledge that I have the skills necessary to read anything in Braille. This is another addition to my pocketful of independence.

With this new-found "independence" I now *know* that I can do anything, just as my counselor taught. I know that if I want to do something such as go shopping (and let me tell you, on a good day I can shop till I drop like the best of them!) I can go without relying on family and friends to get me there. I know that continuing with my law studies in large-print now, and later in Braille if necessary, are alternatives I can look forward to with success. I know that with the addition of a voice synthesizer to my home and office computers, anything I want to write —whether it be a book or articles — is possible without the frustration and fatigue that come from the use of a magnifying lens and pushing my functional vision to its limits over and over again.

With this "independence" comes putting things on "auto pilot". I get up with an alarm in the morning, test my blood sugar, exercise, take my shower, program my insulin pump, eat breakfast, go to work, perform my job duties without the stress and fatigue I had been experiencing previously. Later the same day I leave work, go home and enjoy a relaxing evening with my family. I often study or write in those evening hours as well. Sound familiar? It is! This is what the majority of people all around the world are doing. However, the major difference here is that *this* "independence" has not been taken for granted. I am so thankful for this pocketful of independence.

A pocketful of independence has again made the outlook on my future bright. It is no longer dim to me. I am mobile again (which seems to be the factor that suffers most with the loss of vision). I am studying again. I continue performing my job duties successfully. I am writing again — my first love. Thanks to a pocketful of independence, I am independent again!

Diabetes mellitus and your feet

by Gerald Robin, D.P.M. and
Robert J. Tanenberg, M.D.

INTRODUCTION

Diabetes Mellitus—What Is It and What Does It Have To Do With Your Feet?

The answer to these and other related questions is of extreme importance to the 10 million Americans who suffer with the disease known as diabetes mellitus. The term is a Latin phrase describing a condition with excessive sweet urine. Although this disease has been known since 1500 BC, it wasn't until the 1920s that it was further delineated. At that time it was discovered that this disease is a result of a deficiency of insulin.

Insulin is a substance (or hormone) that is produced by the beta cells in the pancreas. When the pancreas produces inadequate amounts of insulin, or if the insulin is not effective, the body's regulation of sugar (glucose), starch, and other carbohydrates becomes defective. The condition is diagnosed in the laboratory by an elevated fasting blood glucose (sugar) level (over 140 mg %) also known as hyperglycemia. Hyperglycemia frequently causes sugar to spill into the urine, and symptoms of increased thirst, increased urination, weight loss, blurry vision, or itching may occur.

Eighty percent of the 10 million diabetics in this country develop the disease after age 40 (*adult onset* diabetics) and may be treated with diet, use of oral medications, or insulin. Approximately 20 percent of diabetics are *juvenile* diabetics and must take injections of insulin to survive. Although treatments are available for both types of diabetes, there is no cure for the disease. It is for this reason that, for more than 60 years, the medical community has witnessed premature death and disease from complications of diabetes. The purpose of this booklet is to help the diabetic patient prevent complications, specifically those involving the feet. First, however, let us look at some of the causes of foot problems in diabetics.

Infection

Any diabetic patient, particularly one who runs very high blood sugars (i.e., are out of "control"), is more prone to infection. When the blood sugar is higher than normal, white blood cells which normally fight infection do not work properly. As a result, bacteria and other organisms may invade tissues at a rapid rate, causing inflammation, abscess formation, and occasionally blood-borne infection (sepsis). Because the feet are frequently exposed to trauma, infection in the feet can be quite common. Once the skin is broken, bacteria may reach soft tissues and cause cellulitis if the skin is involved, or osteomyelitis if bone is involved. All diabetic patients can decrease their susceptibility to infection by good control of diabetes with the proper diet, insulin, and exercises prescribed by their physicians.

Neuropathy

After several years of poorly controlled diabetes mellitus, a complication known as neuropathy may ensue. Elevated blood sugars seem to cause deposition of a sugar-protein complex known as glycoproteins in the nerves, particularly in the lower extremities. When the nerves of the feet are damaged there is usually a decrease in sensation. Thus the patient with neuropathy may have difficulty in differentiating between hot and cold, sharp and dull, and other sensations. A diabetic patient with neuropathy could walk for many days on a carpet tack that is clearly protruding through the shoe and into the sole of the foot. If this person does not feel pain, he may continue to walk on this tack, which then sets up a secondary bacterial infection. A little pebble which may become lodged in the shoe may not be felt by a diabetic patient, leading to the same problem. Likewise many patients end up losing a leg because they fail to test bath water with their hand rather than their foot, or they sleep with hot-water bottles, electric blankets or heating pads set too high, leading to burns and infection.

Patients may have severe pain with neuropathy. Pain which occurs during the night, frequently awakening individuals from their sleep, is characteristic of neuropathy. In addition, nerve damage may lead to weakness in the small muscles of the foot and leg, creating imbalances. When muscle imbalances occur the foot may be prone to develop hammertoes, bunions, and other deformities, all of which may cause friction, breakdown, and infection.

How does a diabetic patient know whether or not he or she has neuropathy? The diagnosis of neuropathy can be made very easily in the physician's or podiatrist's office. Your doctor should examine the feet, testing to see if reflexes are present. In addition, a check for sensation in the lower extremities is mandatory. Classically, diabetic neuropathy causes a loss of ankle-jerk reflexes with preservation of the knee jerk. Marked decrease to pin-prick and vibratory sensation in the so-called "stocking distribution" is also a frequent finding. In some cases your doctor might want to perform special studies called nerve conduction velocity or electromyography to confirm the diagnosis of diabetic neuropathy.

Peripheral Vascular Disease

Diabetes appears to be an impor-

(Continued on page 12)

(Continued from page 11)

tant cause of hardening of the arteries. Together with hypertension, hypercholesterolemia, and cigarette smoking, diabetes is one of the four important risk factors in the development of premature hardening of the arteries. Diabetics in particular are prone to narrowing of the arteries in the lower extremities, which causes signs and symptoms of poor circulation. The most common symptom of poor circulation is pain in the calves while walking. This pain is usually relieved promptly with rest, only to recur with exercise (particularly walking). If circulation is severely impaired, pain may occur at rest as well as with exertion. When circulation is poor there will be poor hair growth on the toes, nails may become dystrophic (diseased and irregular), and the feet may become bright red when a person sits with his legs not elevated. Your physician can help diagnose poor circulation by checking for the pulses which are present in the feet. The clinical diagnosis can be confirmed with an ultrasound wave machine called a Doppler or with a pulse volume recorder which reveals variations in blood pressure. Poor circulation may improve dramatically if one discontinues smoking cigarettes. If not, it may be improved with medication or exercise, or permanently relieved with surgical bypass of the narrow arteries in the leg.

What Is A Diabetic Foot Ulcer?

When an opening in the skin of a diabetic patient occurs it may form a small crater which is commonly known as an ulcer. This ulcer may be due either to neuropathy or poor circulation, or occasionally both. If bacteria are growing in the ulcer, it is known as an infected ulcer. If infection persists long enough it may involve the bones in the feet and this is known as osteomyelitis.

What Is Diabetic Gangrene?

Gangrene is one of the most feared complications of diabetes. It occurs when overwhelming infection is present in a localized area of the foot with resulting death to that tissue. This is generally noted in a black area that may be quite dry or wet, exuding pus.

How Are Foot Ulcers and Gangrene Treated?

Diabetic foot ulcers may occasionally be treated conservatively with the use of bed rest and antibiotics. These may be prescribed by the podiatrist or the internist. In addition, podiatrists can frequently improve ulcers by the use of foot supports to redistribute weight. If, however, osteomyelitis or gangrene is present and is neglected or untreated, some form of amputation may be necessary. This may include single or multiple toes, the entire foot below the knee and, in severe cases, the entire leg including the knee. Although this may seem to be a disabling treatment, many diabetic patients are successfully rehabilitated after amputation and are able to return to work and live useful and productive lives.

WHAT CAN YOU DO?

Exercise

Many of the complications associated with diabetes can be avoided. Walking is an excellent exercise for diabetics who are in otherwise good health. Such an activity will improve circulation. Walk for as long as possible every day, using the same route and pace. Keep it up, but stop if pain occurs. Each day, try to increase the distance walked without having to stop.

Even professional athletes have to warm up before beginning their activities, and so should you. Recommended warming-up routines include the following:

1. Raising heels: Raise yourself up on your toes and go down again. Repeat 20 times.
2. Knee bending: Lean against a chair and do knee bends as low as possible. Keep your back upright.
3. Leg Sweeps: Place yourself with one foot slightly raised on a book. Lean against a chair and sweep the other leg forward 10 times.
4. Tiptoe Exercises: Hold on to a chair and raise and lower yourself on your toes.
5. Chair Exercise: Sit down on a chair and raise yourself up again while keeping your arms crossed.
6. Stair Exercise: Ascend a flight of stairs briskly, raising yourself on tiptoe as you climb.
7. Walking Exercise for Tight Calf Muscles: Lean against a wall on the palms of your hands, keeping the arms below the height of the shoulders. Stretch your legs out behind you. Keeping your feet flat on the floor and parallel, bend your arms and lean forward, the body remaining stretched out. Repeat 10 times.

Circulation can also be improved by participating in prescribed sports activities. In addition, persons with diabetes should not smoke. Check with your physician or podiatrist for specific exercises and treatments.

Avoiding Foot Ulcers

Adhering to these rules will assist the diabetic in avoiding foot ulcers:

1. Injuries to the feet must be avoided if at all possible.
2. Each day, inspect feet for cuts, redness, swelling, or sores.
3. If foot inspection is difficult for you, have a friend or family member help.
4. Never walk barefoot.
5. Avoid extremes of hot and cold, especially electric blankets and hot-water bottles.
6. Never wear garters or elastic bands.
7. Gradually work in each new pair of shoes, and make sure they are comfortable and fit well.
8. Avoid all "do it yourself" foot treatments, including caustic corn remedies and strong chemicals.
9. Orthoses or molds may be prescribed by a podiatrist to improve gait and thus avoid pressure problems, as well as to assist in correcting muscular weakness and imbalance.
10. Obtain regular foot examinations.

Foot Care Tips

Proper hygiene of the feet of a diabetic is essential. The following tips are provided.

1. Keep feet clean, warm, and dry. If excess perspiration is a problem, change socks two or more times per day.
2. Inspect feet daily.
3. Dry feet carefully after washing. Don't forget to dry between the toes, using a hair dryer in the cool position if necessary.
4. Apply a moisturizing lotion to the feet after bathing.
5. Cut toenails after bathing when they are soft. Cut straight across, and never get too close to the skin. Those with poor vision or unsteady hands should consult a podiatrist for assistance.
6. Wear bed socks if you have cold feet at night. Never warm your feet with a heater.
7. Switch off an electric blanket before falling asleep. Never bind covers down over feet.
8. Powder feet and shoes after bathing.
9. Treat cuts with a mild antiseptic.
10. See your podiatrist or physician if you develop:
    a. athlete's foot (cracking between the toes)
    b. any sores or wounds on the feet
    c. ingrown nails
    d. numbness or pain in the feet or legs

Take Care and Enjoy

Diabetes is a serious problem and the feet of the diabetic deserve the best of care. With proper professional management and personal care, however, this disease should not limit activity.

Physical activity is important for the diabetic—as it is for all people. Consult your medical doctor and podiatrist for any specific questions you may have about an exercise program, or for general foot care for the diabetic. Podatrists are part of the health care team that keeps you functioning with good foot health. Your feet must last a lifetime, so please treat them with respect.

FOR ADDITIONAL INFORMATION
American Podiatric Medical Association, 9312 Old Georgetown Rd., Bethesda, MD 20814-1621. •

or

American Diabetes Association, Washington, D.C., Area Affiliate Inc., 1660 Duke St., Alexandria, VA 22314; (703) 549-1500.

(*Note:* The booklet, *Diabetes Mellitus and Your Feet,* is reprinted with permission of the American Podiatric Medical Association.)

Foot care

by Neil M. Scheffler, DPM

Dr. Neil M. Scheffler is a podiatrist in private practice in Baltimore. He is president of the American Center for Foot Health Research. The Center conducted one of the clinical studies on the effectiveness of capsaicin for the relief of foot pain caused by diabetic neuropathy.

The common hot-pepper plant not only provides spicy flavor in Tex-Mex dishes, it also may be the source of a chemical that relieves the pain of diabetic neuropathy.

Neuropathy is one of the most common complications of diabetes. Although there is no cure for this complication, there is a new treatment for neuropathy pain, particularly the pain that affects the feet.

This complication can affect the eyes, stomach, hands or feet. When it strikes the feet, the symptoms can include burning, numbness, "pins and needles" sensation, loss of feeling, skin ulcers and pain.

This pain can be severe, or it can be mild. Some people who have this problem say that the pain "burns like fire"; others say it feels like "knife-like jabs." Most people find that the pain is worse at night, when they are not distracted or involved in daytime activities.

People with severe pain from neuropathy may find it hard to wear shoes.

Leisure activities are stopped. Walking can be very painful and working may be impossible.

Some people can't even sleep, because of the pain.

To relieve this pain, scientists have been studying the effects of a chemical obtained from the common hot pepper plant.

The chemical is called capsaicin, and it is now available as the active ingredient in a cream that is applied to the painful areas caused by neuropathy.

Capsaicin works by removing a chemical called substance P from the nerves in the painful areas. This stops the brain from feeling pain.

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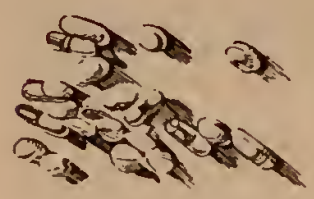

Getting a second opinion

Your choice facing elective surgery

Think about it.

When your doctor recommends surgery for the treatment of a non-emergency medical problem, you owe it to yourself to understand all the facts involved.

Most of the nine million surgical procedures performed in the United States each year result in desired outcomes of better health, the repair of undesirable conditions or the control of disease. But, not all surgery is necessary. Some may even be unwarranted. Some can be deferred. And many conditions may be treated just as effectively without surgery.

While physicians usually agree on whether surgery is actually unwarranted, they may not always come to the same conclusion as to whether elective surgery is the best course of action for a particular patient. In some cases the choices in a situation may weigh equally, and the preference of you, the patient, may tilt the decision toward or against surgery. In all cases you are entitled to know the range of choices open to you, to have those choices objectively considered by professionals, and to have your own preferences considered before undergoing a surgical procedure.

If your physician recommends surgery, and it is not an emergency, you may want to be sure that the recommendation is the best choice for you. You may want to get a second opinion from another physician. Medicare, as well as many private health insurance plans, encourages second opinions. Medicare will help pay for a second opinion in the same way it pays for other services of a physician.

QUESTIONS YOU SHOULD ASK

Before agreeing to any non-emergency surgery, you should know the answers to these questions:

1. What does the doctor say is the matter with you?
2. What is the operation the doctor plans to do?
3. What are the likely benefits to you of the operation?
4. What are the risks of the surgery and how likely are they to occur?
5. How long would the recovery period be and what is involved?
6. What are the costs of the operation?
7. What will happen if you don't have the operation?
8. Are there other ways to treat your condition that could be tried first?

Ask these and any other questions you may have to get a full understanding about your surgery or treatment. Your decision may be better for it.

WHEN YOU SHOULD GET A SECOND OPINION

Sometimes surgery is done on an emergency basis, because any delay could be life-threatening. Cases of acute appendicitis or injuries from an accident are considered emergency. Second opinions are seldom possible for this kind of surgery because it must be done right away or within a few days.

But much surgery is not an emergency. You have the time to choose when you want to have it, and even if you will have it. Some operations that are usually NOT emergencies are tonsillectomies, gall bladder operations, hysterectomies, hernia repairs and some cataract operations.

Getting a second opinion is standard medical practice. Most doctors want their patients to be as informed as possible about their condition.

HOW TO FIND A SPECIALIST TO GIVE YOU A SECOND OPINION

If your doctor recommends non-emergency surgery, there are several ways to find a surgeon or another specialist in the treatment of your medical problem:

1. Ask your doctor to give you the name of another doctor to see. Do not hesitate to ask; most physicians will encourage you to seek the second opinion.

2. If you would rather find another doctor on your own:

• You can contact a local medical society, osteopathic or podiatric schools in your area for the names of doctors who specialize in the field in which your illness falls.

• You can call Medicare's toll-free number, (800) 638-6833. In Maryland, call (800) 492-6603, to find out how to locate a specialist near you.

• If you're covered by Medicare, you can call your local Social Security Office (listed in your telephone directory under Health and Human Services).

• If you're eligible for Medicaid, you can call your local welfare office.

GETTING A SECOND OPINION

Some people do not feel comfortable letting their doctor know they want a second opinion. However, if you tell your doctor, you can also ask that your records be sent to the second doctor. In this way, you may be able to avoid the time, costs and discomfort of having to repeat tests that have already been done.

When getting a second opinion, you should tell the second doctor:

• the name of the surgical procedure recommended, and

• any test you know you have had.

If the second doctor disagrees with the first, most people find that they have the facts they need to make their own decision. If you are confused by different opinions, you may wish to go back to the first doctor to further discuss your case. Or you may wish to talk to a third physician.

PAYING FOR A SECOND OPINION

Medicare will pay for the second opinion at the same rate it pays for other services. Always ask your doctors, therapists or other medical suppliers if they will accept assignment of Medicare benefits as full payment.

Many private insurance companies pay for second opinions. You can contact your health insurance representatives for details. Most state Medicaid programs will also pay for second opinions.

KEY POINTS TO REMEMBER

• You can get a second opinion whenever non-emergency surgery is recommended. Most doctors approve of patients getting a second opinion and will assist you in doing so.

• Second opinions are a way for you to get additional expert advice from another doctor who knows a lot about treating medical problems like yours.

• Second opinions can reassure you—and your doctor—that the decision to have the surgery is the correct one.

• Second opinions are your right as a patient. They can help you make a better informed decision about non-emergency surgery.

• Medicare will pay 80 percent of reasonable charges for beneficiaries enrolled in Medicare Part B who seek a second opinion. A third opinion, if necessary, will be covered the same way.

• Patients may call a Health Care Financing Administration toll-free number, 800-638-6833 to locate the name of a nearby second opinion health specialist.

• The final decision regarding your health is up to you. After all, it's your body. Isn't your body worth a second opinion?

For additional copies of this brochure, write:

SURGERY HHS
WASHINGTON, D.C. 20201

(*Note:* This appeared in a pamphlet by the US Department of Health and Human Services, Health Care Financing Administration, HCFA Pub. No. 02114, June 1989.)

Wound care centers offer bold new approach to healing

by Michael West

If General George Patton were a physician today he'd be in the wound healing business.

New, highly aggressive therapy is supplementing traditional wound healing methods that narrowly focused on infection control. Hospitals nationwide are establishing wound care centers where targeted therapy results in fewer amputations, faster and more durable wound healing, and even saves patients and insurers health care dollars.

With the new approach to wound care, the results are so outstanding that it sounds like a "miracle cure." However, the new approach is mostly common sense wound management combined with an aggressive, outcome-oriented attitude toward healing.

One part of the new therapy does border on being a "miracle." It's a biotechnological breakthrough call PROCUREN™ — a wound-healing formula that is derived from the patient's own blood platelets. When applied to a wound, the solution stimulates tissue formation by applying five growth factors directly at the wound. In patients with impaired circulation, the growth factors needed for healing have difficulty reaching the wound site. Applied daily by the patient, Procuren leads to much faster and more durable healing.

The wound-healing formula is offered as an important part of the wound care center therapy approach to comprehensive out-patient wound care. These centers have been established at 23 hospitals in the U.S. so far. They treat wounds such as diabetic foot ulcers, decubitus ulcers, venous stasis ulcers, and trauma wounds or surgical incisions that won't heal with standard treatments.

The new approach offers hope to diabetics with non-healing wounds. In fact, many wound care center patients are referred for treatment as a last resort before amputation.

Ron Scott, M.D., whose private practice has concentrated on treating chronic wounds since 1985, works with patients at the Wound Care Clinic of North Texas in Dallas. Dr. Scott says patients are amazed at the results of the new therapy approach. "Patients rave about the Procuren — it's the focal point of healing from the patient's point of view. And I've been amazed at what I've seen it do," he says.

But Dr. Scott emphasizes while the Procuren is an important part of the therapy, of equal importance, he says, is the "institutionalized wound care approach, rather than the traditional, fragmented approach to wound healing. Now it's 'under one roof' with the wound care clinic as a part of the medical team treating the wound."

(Continued on page 14)

(Continued from page 13)

With the wound care clinic approach, wounds heal in most patients in eight to 14 weeks, with the average healing time being 10 weeks.

Lynda Valdez, R.N., works in the north Texas clinic with Dr. Scott, and she is a certified nurse in wound care. She says diabetic wounds can be frustrating to treat because they are often chronic. Some of her patients have had their wounds for five years.

"In the past," she explains, "all we could do to treat these wounds was to put them in the best environment possible with traditional therapy. We never had anything active to put into the wound to promote healing. Now we do (with Procuren).

"It's not holy water, though — we still have to cure the underlying pathology, still practice good wound care."

Patients are normally referred to a wound care center by their own physician after traditional wound healing practices have not worked. When a patient is first treated in the center, minor surgical procedures might be required to remove dead or infected tissue from the wound. An antibiotic regimen is also used against infections. For wound care center patients hospitalization averages less than one-half the typical length of stay for wound treatment.

The wound care center usually has its own laboratory to process the Procuren from approximately two ounces of the patient's own blood. The center also offers one-stop access to many different health care specialties including physicians and clinical staff.

In addition to providing the wound-healing formula the center's professionals also analyze and evaluate patients to determine a cause for the non-healing wound. Then patients are advised on methods to prevent future wounds and ulcers. Methods include wearing proper shoes, using special mattresses, and even nutrition to help promote tissue health.

Both Dr. Scott and Nurse Valdez emphasize the importance of patient education. Dr. Scott says, "The clinic offers the opportunity to re-educate the diabetic patient to stop wounds from coming back. The therapy is effective, so they see results, and they don't want to have this problem again."

THE WOUND CARE CENTER[SM] PROGRAM

When a patient enrolls in the program at the wound care center, he or she begins with a medical history and physical exam. Then a complete evaluation is made of the wound including area and volume measurements, infection analysis, bone exposure, and other characteristics.

Photographs are taken of the wound area, and tests are conducted to determine the amount of blood and oxygen that is reaching the wound. X-rays might be required as well.

Based on the results of the tests and evaluation procedure, a patient might require vascular reconstruction surgery which might include a vein bypass. The wound might require extensive cleaning of dead tissue (debridement), generally an out-patient ambulatory surgical procedure. Antibiotics would be given to fight infection. Special stockings might be prescribed if limb swelling is present.

The patient then begins the Procuren therapy with blood being drawn to process into the wound healing solution. Nurses teach the patient techniques for applying the solution to the wound and instruct in precautions for its use and storage (the solution must be kept frozen until day of use). Patients are also taught ways to protect wounds during the healing process.

At each clinic visit, a wound evaluation is conducted to evaluate the wound healing progress, and photographs are taken. Additional debridement or infection control might be needed at these times to assure continuous healing and good functional closure of the wound.

Exercise and dietary recommendations are also made as part of the comprehensive, aggressive wound healing approach utilized in the clinics.

WHO ARE THE WOUND CARE CENTER'S PATIENTS?

About half the patients at a typical wound care center are diabetics with peripheral vascular disease that impairs wound healing. Another 12% are other peripheral vascular disease patients. Venous stasis ulcers (also a circulatory problem) account for 21% of patients at the centers. The remaining 17% of the center's patients have other sores, ulcers or wounds resulting from trauma, surgery or plastic repair. Transplant recipients are also patients at the centers because they sometimes develop non-healing wounds as a result of their suppressed immune systems.

Nationally, it's estimated that 15% of diabetics develop chronic non-healing ulcers or wounds, especially on the legs and feet. That's a population of up to 1.5 million people in the United States.

There are 60,000 amputations performed in this country each year. Utilizing the wound care center aggressive approach to healing, this number could be cut substantially. Amputations are not eliminated as the treatment of last resort; however, many wounds that would have required amputation either heal completely or are treated with much less serious amputation after the wound care center therapy.

It is estimated that up to 80% of patients who would have had an amputation can be healed with Procuren and the wound care center comprehensive therapy.

PROCUREN[TM] — A GROWTH FACTOR BREAKTHROUGH

David Knighton, M.D., is credited with developing the biotechnological methods that led to the platelet-derived wound healing formula used in the wound care center therapy. Knighton was a medical student at Harvard University in the '70s conducting research on the blood's wound healing factors.

Knighton isolated specific proteins from blood platelets — growth factors that stimulate blood vessel growth, attract new skin cells, and promote scar tissue formation on wounds. The live wound healing factors are extremely difficult to extract from the platelets. Knighton's process not only allows the factors to be successfully extracted, it uses only a small amount of the patient's own blood. (Researchers are now working on ways to isolate the growth factors from any blood, a process that could lead to prescription solutions for wound healing.)

By applying the wound healing formula directly to the wound, the process bypasses the body's sometimes impaired circulatory system. The formula promotes capillaries, granulation and skin tissue needed for wound healing.

In 1986 Knighton helped establish the first Wound Healing Clinic at The University of Minnesota Hospital and Clinic. More clinics have since opened in the U.S. through the efforts of Curative Technologies, Inc.

Dr. Knighton might not be related to Gen. Patton, but his wound healing formula has the "firepower" to deliver what's needed directly to the target — the non-healing wound. The success of the active wound healing approach of the wound care centers is being increasingly recognized as being much more effective than the passive approach of only infection control.

Dr. Scott hopes to see further biotechnological advances in the future. "Someday we might be able to biopsy the wound and determine specifically which growth factors are deficient," he predicts.

Scott also points out that the future of wound care is definitely going in the direction of the wound care clinic approach. "Growth factor therapy is available and is effective," he explains, "but it needs to be used in the clinic setting. The clinic is part of the team that includes the patient's physician and other specialties."

That's good news for diabetics who might have been faced with a $40,000 amputation. Now they might save their limb and heal their wound for as little as one-fourth of that amount. As a bonus, the comprehensive care approach will help lessen their chances of getting another non-healing wound.

(*Editor's Note:* For information regarding locations of wound care centers, contact: Ron Scott, M.D., The Wound Care Clinic of North Texas, 8210 Walnut Hill Lane, Suite 718, Dallas, TX 75231; telephone: (214) 891-4114. As of December 1, 1990 there are 22 wound care centers in the United States. In the next issue of the ***Voice***, Volume 6, Number 2, names of centers and their addresses will be listed.)

The diabetic foot — the role of hyperbaric oxygen therapy

by Herbert A. Ferrari, M.D., J.D.[1] and Thomas W. Burns, M.D.[2]

[1] *Professor of Anesthesiology and Surgery; Director, Hyperbaric Medicine Center*

[2] *Professor of Medicine; Director, Division of Endocrinology and Metabolism; Director, Cosmopolitan International Diabetes Center*

(The authors of this article work at the University of Missouri-Columbia, Hospital and Clinics.)

The diabetic's foot problems are predictable, frequently preventable and should be treated with a multidisciplinary approach if they appear.

They are predictable because the complete clinical syndrome of diabetes mellitus involves large-vessel disease (arteriosclerosis) and neuropathy (injury to nerves).

They are frequently preventable by complying with some general rules:

(a) DO NOT SMOKE, because smoking increases the risk of circulatory problems. A history of smoking is nearly always present in diabetics who require foot amputation;

(b) AVOID DRINKING ALCOHOL, because an alcoholic peripheral neuropathy may worsen the diabetic neuropathy;

(c) WASH YOUR FEET EVERY DAY and dry them carefully, especially between the toes. At that time INSPECT YOUR FEET for blisters, cuts and scratches. Apply lanolin or a lanolin-based creme to the feet, to soften the skin and avoid cracks and calluses;

(d) Visit a PODIATRIST to remove calluses and trim your nails; inform the podiatrist that you are diabetic;

(e) LOOK AND FEEL INSIDE YOUR SHOES every day for rough edges, nail points and foreign objects. Always wear properly fitted stockings, not mended or with seams;

(f) DO NOT WALK BAREFOOTED. Avoid very hot and very cold temperatures; the diabetic foot perceives pain poorly or not at all.

If meticulous foot care prevention of wounds fails, the treatment of the wound will require a *multidisciplinary approach.*

If the foot is cold, probably the circulation is not adequate, and the oxygen carried by the blood is not getting to the wound in the amount necessary to implement the healing. If feasible, a vascular by-pass surgical procedure may increase the circulation (and oxygenation), and the wound will heal.

(Continued to page 16)

Access to personal computers for the blind

by Curtis Chong and
Steve Jacobson
National Federation of the Blind
in Computer Science

Curtis Chong is an active member of the NFB and has vast knowledge about computer systems.

(**Editor's Note**: This review was made in April, 1989, and gives detailed information about several software/hardware systems "designed to permit blind persons to access the video display of an IBM Personal Computer (PC)." It is well written and easy to understand. Following is the introduction to the review, but not the actual review of 45 pages.

There is no charge for the full review in print or on cassette. Order from: Job Opportunities for the Blind (JOB), National Federation of the Blind, 1800 Johnson Street, Baltimore, MD 21230; telephone toll-free: 1-800-638-7518.)

Today, blind persons who require access to the video display of an IBM PC are confronted by an overwhelming plethora of speech and Braille screen review systems marketed by a wide variety of companies. When the IBM PC first appeared on the scene, there was nothing available that afforded the blind independent access to data displayed on its video monitor. In late 1983, one software package became available: PC Speak, marketed by Solutions by Example. Although, as far as the blind were concerned, PC Speak was far from ideal, it was the only screen review system at the time. Today, there are more than eight software screen review packages available that utilize synthetic speech output and three Braille output methodologies using hardware and software.

The question that plagues many blind consumers is, "Which system is the best one to buy?" Certainly, when you consider the large variety of screen review systems for the IBM PC available in today's market, the answer to that question can be difficult to come by.

It is not the intent of this report to analyze every single screen review system (speech or Braille) that is being marketed today. A lot of information about screen review systems for the IBM PC has been published elsewhere. Rather, the information in this report relates to programs and systems that have not only captured the attention of blind consumers but which seem affordable to the average blind person who needs or wants to use a computer. All of the speech systems discussed here are priced under a thousand dollars.

The authors of this report have had direct user experience with most of the programs or systems discussed. Those programs or systems for which little or no experience has been obtained are mentioned primarily because it is our belief that readers will be interested in obtaining additional information before making the final decision about which program or system to purchase.

Each system discussed will, given the right set of circumstances, be of some use to the blind person who needs to have independent access to the IBM PC. No system is "the perfect system," and, by the same token, no system is totally without merit. The choice of which system to use is a highly individualized one. Much will depend upon the specific environment in which the screen review system will be used, the amount of funding available to purchase a system, the extent to which certain features such as macro keys or interruptability are required and the ability of the blind person to feel comfortable with a particular screen review package.

One final point needs to be made about the screen review market for the IBM PC. It is in a continual state of flux. Developers continue to make changes to their respective screen review systems in their never-ending quest to acquire a larger share of this relatively small market. Consequently, information that is current today will doubtless be out of date by the time you read this material. We can only suggest that you contact either the vendor of your choice or the National Federation of the Blind in Computer Science for more current data.

Clinical research

(Continued from page 9)

focal treatment, the laser beam is aimed at and seals the leaky retinal blood vessels that cause macular edema, the swelling typical of retinopathy. In scatter treatment, the laser beam is used to produce many tiny burns scattered throughout the retina, sparing the macula. This slows the growth of new blood vessels and the development of hemorrhage and scar tissue, while preserving central vision.

Focal treatment for macular edema proved so helpful in reducing the risk of visual loss that in 1985 the ETDRS scientists changed the treatment plan. After that, both eyes of every patient in the study were eligible to receive focal treatment if vision was threatened by macular edema. The final study conclusions overwhelmingly support these original findings.

Study conclusions also revealed that scatter treatment reduces the risk of severe visual loss whether given early or deferred until the development of high-risk retinopathy. But, provided careful follow-up can be maintained, study investigators concluded that it is not unreasonable to defer scatter treatment until retinopathy approaches or reaches the high risk stage. The study found that the rates of severe visual loss were low for all ETDRS patients.

The study also investigated the effects of aspirin on retinopathy. According to anecdotal information cited before the ETDRS, the incidence of severe retinopathy seemed lower than expected in diabetic patients taking aspirin for arthritis. Because aspirin is known to slow blood platelet clumping, ETDRS scientists decided to test whether aspirin could change a person's blood chemistry in ways that affect the development of reintopathy. They concluded that two aspirins per day (650 mg.) does not alter the progression of diabetic retinopathy, and that there is no reason for people with diabetes to avoid taking aspirin when it is needed for treatment of other problems.

Vascular disease study

A unique study of diabetes in children has been in progress for the past fifteen years at the Eye Research Institute, in cooperation with Children's Hospital in Boston, with funding from the National Eye Institute. In the Diabetes Vascular Disease and Control Study, researchers Sheldon Buzney, M.D., Kenneth Gabbay, M.D., and Gilbert Feke, Ph.D., have been following patients, who are now young adults, since they were children. The project is studying retinal blood flow (via the laser Doppler velocimeter), the physical appearance of the retina, and monitoring of glucose levels in the blood, indicating how well a diabetic patient is following a proper diet and insulin regimen.

According to Elna Rapp, R.N., coordinator of this study, about 30 of the participants in the study gathered together at the Institute for a reunion and a general update on the study in October. Many of them had entered the study around the age of ten, and are now young adults who have scattered across the country and are pursuing careers of their own. "This is the only group of childhood diabetics that we know of which has been studied so extensively for such a length of time," said Ms. Rapp. At the recent meeting, two subgroups studies of the same patients were initiated: one on the effects of microalbumin uria, and one on the effect of aspirin on retinal blood flow. Data from these studies are still being analyzed.

(*Note:* Reprinted with permission from *Sundial*, the publication of the Eye Research Institute, Boston, Massachusetts.)

Against all odds

(Continued from page 8)

came somewhat self-conscious about my handicap," she remembers. "But my family helped me through that period. Besides, we lived way out on a farm and we didn't have much opportunity to socialize with our peers. We were usually pretty busy on the farm."

The family moved to Coquille where she was married at age 21. Her husband was killed in an automobile accident in 1968. She remarried in 1969. Her second husband died of cancer in 1984

She has one daughter, Christina Ray and a granddaughter, Tawnya.

She moved to Roseburg in 1977. "I wanted to move to a larger town where I could keep active and independent," she said. She's done that with her positive outlook on life. She says she loves people and keeps herself busy with an active social life. Bingo is one of her social outlets.

But how does a blind person play bingo?

With ingenuity, Vi plays with special bingo cards she designed herself, replicating a set of standard bingo cards with braille markings to correspond with the numbers on the card.

She deftly checks the card with her fingers as the bingo caller sounds off the B-I-N-G-O letters and numbers. She uses only four cards and says she has them memorized now. She has no more difficulty than any sighted bingo player, and her competitors will tell you Vi wins one-fourth to one-third of the time in each bingo session.

She may have an edge, though. She says she wears a little pin she received as a Christmas present in 1988 and considers it a "good luck charm."

She's kidding, of course. After all, when you have lived a 67-year winning streak, who needs a good luck charm?

(*Note*: This article appeared July 12, 1990 in *The News-Review*, Roseburg, Oregon.)

Ann Terry is a registered dietitian who works at the State Hospital in Fulton, Missouri and at the Veterans Administration Hospital in Columbia, Missouri. She graciously calculates the diabetic exchanges and food values for our recipes.

Send your great ideas to the editor. He is the official taste tester and needs recipes to test his taster.

Mostaccioli Ground Beef Supper
Submitted by Frances Allen
from Columbia, MO

½ lb. mostaccioli
1 lb. lean ground beef
1 medium onion, chopped
1 cup chopped celery
1 (14-oz.) can of tomatoes
2 (8-oz.) cans of tomato sauce
2½ tsp. salt
¼ tsp. pepper
½ tsp. chili pepper

Brown ground beef. Add onions and celery to meat while browning. When meat is browned, add remaining ingredients including drained mostaccioli. Pour into 3 qt. casserole. Bake in oven for 30 minutes at 350 degrees.

Yield: 6 servings; Calories: 350; Diabetic Exchanges: 2 meat, 2 starch, 2 veg.

Chocolate Drizzle Bars

This recipe is from the Midwest Diabetes Treatment and Education Center, Columbia, Mo.

2 c. all-purpose flour
½ c. walnuts, chopped
½ c. margarine, softened
½ c. orange juice
¼ c. liquid sweetener
2 tsp. baking powder
2 tsp. vanilla extract
½ tsp. salt
1 egg
1 - 1 oz. envelope no-melt unsweetened chocolate flavor for baking

Preheat oven to 350 degrees. Grease 13x9-inch baking pan. In large bowl, stir all ingredients except chocolate flavor until well mixed. Spread evenly in pan. Bake 20 minutes or until lightly browned around edges. Drizzle chocolate over warm, uncut bars. Cool slightly. Cut into bars.

Yield: 4 dozen; Calories: 85; Diabetic Exchanges: ½ bread, 1 fat (2 bars).

Diabetic Cake
Submitted by Linda Carstens
from Virginia, MN

1 c. raisins
1½ c. water
½ c. shortening
1 egg
1 c. oatmeal
1 Tbsp. artificial sweetener
1 c. flour
1 tsp. baking soda
¼ tsp. salt
½ tsp. cinnamon

Boil raisins and water. Add other ingredients. Bake in loaf pan at 350 degrees until done (about 45 minutes).

Yield: 20 slices; Calories: 115; Diabetic Exchanges: 1 starch, 1 fat.

Devilled Crab Dip
Submitted by Wendy Brashares
from San Jose, CA

1 - 8 oz. pkg. cream cheese, softened
1 c. mayonnaise
¼ c. sour cream
¼ c. snipped fresh dill
3 shallots, minced
½ packet or cube (crushed) of bouillon
Dash of cayenne or red pepper sauce
7 oz. crab, drained and rinsed
Assorted vegetables

Beat cream cheese until light. Beat in sour cream and mayonnaise. Stir in remaining ingredients except vegetables.

Cool several hours to blend flavors. Serve with assorted vegetables.

Yield: 60 servings at 1 Tbsp./serv.; Calories: 49; Diabetic Exchanges: 1 fat.

Spicy Seasoning

This recipe appeared in the *Kidney Kazette,* published by Dialysis Clinics, Inc., Columbia, Mo.

2 Tbsp. celery seed
1 Tbsp. onion powder
1 tsp. garlic powder
2 Tbsp. crushed oregano
1 Tbsp. crushed thyme
1½ tsp. ground bay leaf
1½ tsp. ground black pepper
1½ tsp. ground cloves
Yield: ½ cup.

Combination foods

by Claire Hammer, R.D.

(*Note:* Claire Hammer, R.D. has produced a Diabetes Education videotape and authored several handouts concerning diabetes and nutrition. Following is one of her handouts reprinted with permission.)

In the video we mentioned that not all foods will be on the exchange lists. It would just be impossible to list them all! But that doesn't mean you can't eat a food just because it isn't on one of the exchange lists.

People with diabetes are usually encouraged to try different foods to add variety to their meals. You may be especially fond of Chinese, Italian or Mexican food for instance. Casseroles, stews, and soups may be foods that fit your budget well. The more of these foods you can try, the more likely it is that you will stick to your meal plans because you don't become bored with them. So be adventurous and try different things!

At the end of this handout are listed some common combination foods that people usually have questions about. For a more complete listing you will want to check on a good cookbook such as some of the ones suggested in Handout No. 6. Many of them have an excellent section on combination foods, fast foods and ethnic foods.

PIZZA, THIN CRUST (¼ of a 10")
2 bread/starch
1 med. fat meat
1 fat

SPAGHETTI & MEATBALLS (1 cup)
2 bread/starch
1 med. fat meat
1 fat

MACARONI & CHEESE (1 cup)
2 bread/starch
1 med. fat meat
2 fats

CHILI WITH BEANS (1 cup)
2 bread/starch
2 med. fat meat
2 fats

CREAM SOUPS (1 cup)
made with water
1 bread/starch
1 fat
made with 1 cup low-fat milk
1 bread/starch
1 fat
1 milk

VEGETABLE SOUP (1 cup)
1 bread/starch

The diabetic foot

(Continued from page 14)

If the foot is warm, often seen in a relatively young diabetic with neuropathy, there is infection and necrosis in the wound, with consequent insufficient oxygen levels at the wound site because of increased consumption.

The infected, non-healing diabetic wound is hypoxic, meaning that it does not have the necessary oxygen because of inadequate blood flow, high oxygen consumption by the infected tissue or a combination of both factors. Hypoxia significantly impairs the bacterial killing by the white cells in the blood, and makes it difficult to provide the structural support to allow the growth of new capillaries. That structure is provided by the fibroblasts and the collagen they deposit. The fibroblasts do not multiply in a hypoxic environment.

The treatment of a non-healing, infected wound in a diabetic foot, will require care by the primary physician to control the blood sugar, nutritional status, hypertension, edema, antibiotic treatment, etc. Avoidance of weight bearing by the foot is critically important.

The treatment may also require the cooperation of the surgeon to debride the wound. If a segment of a large artery is obstructed, a circulatory vascular bypass to improve blood flow to the foot may be done by the surgeon.

Whirlpool treatments may be a helpful follow-up to the initial surgical debridement.

If hypoxia is preventing the wound from healing it may be indicated to have the patient breathe 100 per cent oxygen while the entire body is exposed to barometric pressure greater than sea level (Hyperbaric oxygenation). This is carried out in a specially designed chamber under physician supervision.

Each hyperbaric oxygen treatment takes about 2 hours and the oxygen tension in arterial blood may reach as high as 1,400 mm. Hg instead of the usual 100 mm. Hg while breathing room air at sea level. The treatments are repeated every day, five times a week, and can be provided on an outpatient basis.

The periodic daily elevation of the oxygen tension in the wound increases the fibroblast replication and deposit of collagen, significantly improves white cells' bacterial killing ability for aerobic organisms and directly kills anaerobic organisms. New capillaries grow in this new structure and the healing process is under way.

There have been several reports of increased salvage of potential amputations of the foot when hyperbaric oxygenation was used as an adjunct in an aggressive approach to wound healing. Hyperbaric oxygen is not effective in the elderly diabetic with significant and generalized occlusion of large arteries.

The multidisciplinary approach to the treatment of the non-healing wound in the diabetic foot can change the outlook of so many patients afflicted with this problem. Every year there are more than 60,000 lower limb amputations performed in the United States. Contralateral amputation occurs at a rate of approximately 10%/year. The rehabilitation is only successful in 40-50% of the patients.

The understanding and cooperation of the patient and the teamwork of different specialists employing several therapeutic modalities can prevent in many cases the dreaded amputation.

New book: *Walking Alone and Marching Together*

Walking Alone and Marching Together: A History of the Organized Blind Movement in the United States, 1940-1990, by Floyd Matson.

A STORY NEVER TOLD

This book tells a story — as true as it is dramatic — that has never been told before. It is a story of the epochal struggle and ultimate triumph of a singular American social movement, that of the organized blind, which evolved over the space of half a century from a small vanguard of visionary men and women into a nationwide community of fifty thousand members — recognized throughout the world as a major force in the field of blindness and civil rights.

Unlike previous histories of blindness and the blind, which have dealt almost entirely with the work of benefactors and agencies for the blind, this magisterial study by a distinguished cultural historian — Floyd Matson — breaks new ground in focusing upon the actions and aspirations of the organized blind themselves. It follows the progress of the movement from its historical origins in the remote past to the pioneering adventure of its founding in 1940, then through the early years of lonely struggle for the right of the blind to organize (indelibly associated with the name of John F. Kennedy). Then we see the turmoil of "civil war," followed by renewed harmony, and explosive growth in both size and stature — as symbolized by the establishment of the multi-faceted National Center for the Blind.

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Homer Page, Ph.D.
Professor of Education
Graduate School of Education,
University of Colorado at Boulder

Floyd Matson has lectured and written widely in the fields of minority rights, social thought, and political action. He is the author or editor of eleven books and is the co-author with Jacobus tenBroek of *Hope Deferred: Public Welfare and the Blind* (1959). He also collaborated with tenBroek on the award-winning *Prejudice, War and the Constitution* (1954), detailing the constitutional implications of the evacuation of Japanese Americans from the West Coast during World War II. Professor Matson teaches American Studies at the University of Hawaii.

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ORDER FORM

New diabetic technology lending library

Janet Lee serves on the board of the NFB Diabetics Division. She also works as an Instructor for BLIND, Inc., Minneapolis, MN.

BLIND, Inc. is pleased to announce that we have been awarded a grant that will allow us to establish a diabetic technology lending library. The STAR grant (Systems of Technology to Achieve Results) will be used to purchase technology which will be loaned to newly blinded diabetics. The equipment we have will include a variety of audio glucose meters for testing blood sugars, a variety of systems for measuring daily doses of insulin and other home health care technology.

A qualified instructor will provide demonstration of and information about the equipment available. When the blind diabetic has selected the appropriate equipment for managing his or her diabetes, we will provide instruction on that equipment.

SSB counselors may refer a client to the diabetic technology lending library by authorizing instruction. This instruction could include the use of a glucose meter, equipment to measure daily doses of insulin and non-sighted alternative techniques for independent management of diabetes.

Testing blood sugars, measuring and administering insulin, and other home health care are independent living techniques that are necessary for the survival of every blind diabetic. Blind diabetics need not live in nursing homes or be burdens on their families and friends. They do not need to rely on skilled nursing care. Blind diabetics can manage their diabetes with the same flexibility and independence as sighted diabetics.

Some very positive things can happen when a blind diabetic takes charge of his or her diabetes management. The diabetic usually has better control of blood sugars, which stabilizes mood swings and reduces the risk of some complications. They often have more energy and are more capable of working, socializing and pursuing vocational or independent living skills.

The diabetic technology lending library and instructional services offered at BLIND, Inc., have been designed to be used throughout the state of Minnesota in both metropolitan and rural areas. Our instructor, Janet Lee, a diabetic for 29 years, has worked as an Emergency Medical Technician, and as a health instructor in public schools and adult education. She has provided in-service training for diabetic educators in group health and hospital settings, instruction for public health nurses and training for the staff at BLIND, Inc. She has worked with diabetics of different ages who have had a variety of complications.

Please contact BLIND, Inc. at (612) 339-8401 (Joyce Scanlan or Janet Lee) for additional information.

Foot care

(Continued from page 12)

Our group was one of the research teams that studied the effects of capsaicin cream on the feet of individuals with diabetic neuropathy.

We found, in certain persons, that this treatment relieves neuropathy pain almost completely, allowing some to wear regular shoes again and even permitting them to live normal and rewarding lives.

The treatment is not for everyone. It does not work 100% of the time. It does not cure neuropathy. It does, however, work to relieve the pain caused by neuropathy in many persons.

Although the cream containing capsaicin is now available without a prescription at pharmacies, you should not self-treat your neuropathy pain with this product.

You may, or may not, be a candidate for this treatment.

You should first talk to your doctor (diabetes specialist or podiatrist) about this new treatment. Your doctor has been informed by the manufacturer about this new product, its dosage and its possible side effects.

Before you begin treatment, your doctor must make sure that your pain is caused by neuropathy, and not by another foot problem. If you start this treatment, you will need to be checked by your doctor regularly so that your progress can be monitored, or more importantly, to see if you are developing complications or side effects.

Since capsaicin is applied as a cream that is rubbed on the painful areas, it is unlikely to cause internal side effects.

The most common side effect we have seen, during the clinical trial we supervised, is skin burning. This burning sensation can be especially severe in hot weather or after a hot bath. The burning has stopped, in our experience, after the person has used the cream for some time.

If you use this new cream, you will need to be especially careful to wash your hands thoroughly after you apply it to your skin, to avoid getting any of it in your eyes, where it can cause damage.

As with most modern, powerful medications, treatment with capsaicin cream is not inexpensive. Expect to pay $50 or more for a tube, which will last a week or two, depending on the size of the painful area and the frequency of application.

Most of our patients in our clinical trial got the best results when they applied the cream more than four times a day.

When the pain subsided, we found that some patients were able to slowly reduce the number of applications to three times a day, then twice and even once a day.

(*Note:* Reprinted with permission from *Diabetes in the News,* published by the Ames Center for Diabetes Education.)

What you always wanted to know but didn't know where to ask

(Resource list)

(Inclusion of materials in this publication is for information only and does not imply endorsement by the Diabetics Division of the NFB.)

Equipment

Note: The following three glucose monitoring systems may be ordered from Continental Pharmacy, 3355 Richmond Road, Beachwood, OH 44122; telephone toll-free: 1-800-677-4323.

Diascan S Glucose Monitor: Has 3/4 inch high LCD readout. Normal retail cost is $154.00. Your cost is $60.00 less manufacturer's rebate of $60.00 making the cost after rebate $0.00 plus $5.00 handling.

Diascan SVM Glucose Monitor with Voice Output: Blood may be smeared onto the test strip pad and accurate glucose readings can still be obtained. An instructional cassette and over-the-shoulder tote bag is included with all orders. Your cost is $495.00 less manufacturer's rebate of $125.00 making the cost after rebate $370.00 plus $5.00 handling.

Lifescan One Touch Glucose Monitor with Voice Output: An instructional cassette is included with all orders. Your cost is $495.00 plus $5.00 handling.

Limit one meter per person and minimum of two vials of test strips ($56.58) must be purchased with each meter. Advance payments aren't required; this pharmacy "will prepare and file medicare and private insurance claim forms and will wait for insurance payment." Continental Pharmacy also offers large print or Braille labels at no charge on prescription drugs.

Note: The following three items may be ordered from AIDS Unlimited, Inc., Consumer Products for the Blind, 1101 N. Calvert St., Suite 405, Baltimore, MD 21202; telephone: (301) 659-0232.

Count-A-Dose Insulin Measuring Device: Calibrated for use with B-D U-100 syringes only. By turning a wheel, clicks are heard that measure two-unit increments. Holds one or two bottles of insulin for mixing; the needle penetrates the bottle stopper automatically. Instructions on cassette and in print are provided. Cost: $49.95 plus $4.00 shipping.

The Gourmet Weigh Food Scale: A food scale that can be read tactually and set to zero. There is a dot at every ounce and a raised line at every 4 ounces. Has a stainless steel food tray that sits in a depression so it will not slide off. Weighs about 2 lbs. Cost: $24.95 plus $3.50 shipping.

Adjustable Liquid Measure: By inserting syringe into bottle, up to 2 teaspoons of liquid medicine can be withdrawn using tactual measurements. Comes with cassette instructions. Cost: $4.99 (no shipping charge).

Note: The following two instruments are new on the market and are scheduled to be available in February 1991. To order, contact: Science Products, Box A, Southeastern, PA 19399; phone: toll-free 1-800-888-7400.

The Talking Digitronic 91 Blood Pressure Monitor: An audio blood pressure system with loud voice output and large LCD display. Both give date, time, systolic/diastolic and pulse. Printer prints information for physician and personal health records. Auto inflation to a pre-set level. Cycles automatically to measurement and deflation modes. Rechargeable. Push button operation. Portable monitor weighs 29 ounces and can store 7 readings. Order number: 1571. Cost: $499 plus shipping and handling.

Digi-Temp X-tra Large Display Clinical Thermometer: Clinical thermometer is equipped with a cable which can be plugged easily into Talking Blood Pressure Monitor's Digi-Voice Module (as well as certain other Digi-Voice Modules). Weighs only 5 ounces and is rechargeable. Order number: 1575. Cost: $174.90 plus shipping and handling.

Good Health Combo: This health kit includes the Talking Digitronic 91 Blood Pressure Monitor and the

(Continued on page 19)

Food for thought

National Convention

The annual convention of the National Federation of the Blind will be held this year in New Orleans, LA and attended by approximately 2,500 blind citizens. There will be fellowship and learning as information on all aspects of blindness will be covered. There will be an exhibit hall with hundreds of appliances on display and literature that may interest blind persons. Also, there will be tours offered, which are always fun.

This year, due to another convention being at the beautiful Hyatt Regency, our conference dates start one day later than in previous years. Our activities will begin on Monday, July 1, 1991 and end on Saturday, July 6, 1991. The convention hotel is located in the downtown section near the French Quarter and the Superdome. Adjacent to the hotel is a large shopping center with numerous restaurants.

The address is Hyatt Regency Hotel, 580 Boypoydras Plaza, New Orleans, LA 70140; for reservations, call (504) 561-1234. Nightly room rates are as follows: single $28.00, double $35.00, triple $38.00 and quad $40.00. In addition, there is currently an 11% sales tax plus a $2.00 per night occupancy tax. When making reservations be sure to mention that you will be attending the National Federation of the Blind Convention.

, This convention will be great. So, start packing and we'll see you there.

Dialysis

At the NFB Annual Convention, there are always members in attendance who undergo dialysis treatments. This year, in New Orleans, there are several dialysis units located close to our convention center, the Hyatt Regency Hotel.

Dialysis locations are being set up, and will appear in the April 1990 issue of the ***Voice.***

Hear Ye, Hear Ye, A Raffle

The Diabetics Division of the National Federation of the Blind (NFB) reaches out and provides support and information to many people. This valuable networking costs money, such as the production cost for the ***Voice of the Diabetic,*** and we must generate funds to help cover these costs.

Our Diabetics Division has elected to hold a raffle which will be coordinated by our capable treasurer, Bill Parker. The grand prize will be $200 and the winner's name will be drawn at this year's annual convention of the National Federation of the Blind on Friday, July 6, 1991, in New Orleans, Louisiana. In addition to the grand prize, the person who sells the winning ticket will receive $100.

The cost of each raffle ticket is one dollar, or a book of six may be purchased for five dollars. Tickets may be purchased from state representatives of our Diabetics Division or by contacting raffle ticket chairman, Bill Parker, 857 Ingleside Road, Norfolk, VA 23502; phone (804) 623-1638 in the evenings. Anyone interested in selling tickets should also contact Bill.

Please make all tax deductible checks payable to the National Federation of the Blind. Money and sold raffle ticket stubs must be mailed to Bill parker no later than June 17, 1991, or they can be personally delivered to him at this year's convention in New Orleans, Louisiana. This raffle is open to everyone and raffle participants need not be present at the drawing to win.

NFB Scholarship Program

With more than 50,000 members, the National Federation of the Blind (NFB) is the largest organization of blind citizens in existence. The NFB awards far more in scholarships than any other group or organization. There are 27 scholarships offered, ranging from $2,000-20,000. A total of $87,500 in scholarships will be awarded at the 1991 NFB convention, which will be held in New Orleans, Louisiana. In addition to scholarships, total expenses will be paid for recipients to attend the annual convention of the NFB.

All scholarships are merit-based, and most are unrestricted. Basic eligibility requires the applicant to be legally blind and a full-time student in the Fall of 1991. Criteria by which entries will be judged are academic excellence, financial need, and service to the community. The committee that evaluates and chooses scholarship winners is composed of blind citizens from across the country, with distinguished community and academic backgrounds.

The National Federation of the Blind is an organization dedicated to creating opportunity for all blind persons. Recipients of Federation scholarships need not be members of the National Federation of the Blind.

In the past, we have received approximately 500 scholarship applications each year. Applications must be received by March 31, 1991. Anyone interested may request and receive as many application forms as desired from one of the following:

1. Peggy Pinder, Chairwoman, National Federation of the Blind Scholarship Committee; 814 4th Avenue, Suite 200; Grinnell, Iowa 50112; telephone: (515) 236-3366.

2. Scholarships, National Federation of the Blind; 1800 Johnson St.; Baltimore, MD 21230; telephone: (301) 659-9314.

3. All NFB affiliate presidents.

The NFB Scholarship program for blind students is great. Remember, applications must be received by March 31, 1991, so get your applications in!

JOB

Job Opportunities for the Blind (JOB) is a joint project of the National Federation of the Blind, in partnership with the US Department of Labor. JOB is a listing and referral service for blind job applicants. Hiring the blind is reasonable, proper, and necessary.

Lorraine Rovig, Director
Job Opportunities for the Blind.

The following is the Table of Contents from JOB *Bulletin* #131; recorded July 11, 1990:

1. News Release from the President's Committee on Employment of People with Disabilities — the committee names its five employers of the year.

2. JOB Memo.

3. Employment opportunities with the Internal Revenue Service.

4. Classic tips on selling are useful for anybody — *Arizona Republic,* Sunday, March 11, 1990.

5. Preparations can be very helpful in convincing people to see things your way.

6. Turn annual reports to your advantage when job hunting — *The Atlanta Journal, The Atlanta Constitution,* Sunday, March 18, 1990.

7. United States Information Agency — this letter gives information on how to find out about current job openings within the USIA and other agencies within the federal government.

8. Letter from Ed Bryant, Editor, ***Voice of the Diabetic.***

9. Letter from three employers to JOB — Wausau Insurance Compa-

(Continued on page 20)

What you always

(Continued from page 18)

Digi-Temp X-tra Large Display Clinical Thermometer. Order number: 1570. Cost: $645.00 plus shipping and handling.

From the Librarian

Our Diabetics Division librarian, Cheryl McCaslin, has information concerning all aspects of diabetes available on cassette and in print.

Cassettes are recorded with permission, from literature supplied by the Kentucky Diabetes Foundation. Titles include: High and Low Blood Sugar and Healthy Hygiene; Meal Planning; Urine Testing and Insulin Facts; Nutritional Care for Diabetes Mellitus; Personal Care Record with Food Diary; Diabetes Mellitus; and Nutrition Guide.

Cassettes, recorded at standard speed, cost $1.00 each. Please make tax-deductible checks payable to the National Federation of the Blind. Send orders to Cheryl McCaslin, 3115 Crestview, Apt. 107, Dallas, TX 75235; telephone: (214) 518-8107.

Our librarian reports that she has considerable print literature covering all aspects of diabetes. Several articles are available in the following categories: Diabetic Disorders; Diabetes — general information; Diabetes in Men; Diabetes in Women; Insulin; Neuropathy; Retinopathy; Transplants — Kidney and Pancreas; Beating Diabetes; Flying Solo — Managing Diabetes Alone; and Self-management for Independence. This information may be ordered from the address shown above.

Literature

Note: The following three books may be purchased at local bookstores.

The Complete Diabetic Cookbook, by Mary Jane Finsand. "An indispensable aid for diabetics, for their families and friends. . . The recipes are simple, the information complete." — RBR. Includes the most recent Exchange Lists of the American Diabetes Association (ADA). Paper, 192 pages. Cost: $9.95.

Diabetic Snack and Appetizer Cookbook, by Mary Jane Finsand. Hundreds of snacks that help keep the blood sugar level down. Includes calories and carbohydrate counts, and Exchange Lists of the ADA. Paper, 160 pages. Cost $9.95.

Diabetic Microwave Cookbook, by Mary Jane Finsand. Close to 300 microwave recipes. ADA Exchange Lists, calorie and carbohydrate counts. Paper, 160 pages. Cost: $9.95.

(Continued from page 19)

nies, JG Van Dyke and Associates, and Hazeltime Corporation responded favorably to this year's JOB employer memo.

10. Interview Strategy — this section includes four articles on different aspects of interviewing; even the most seasoned job hunter may find a useful tip here.

All JOB publications, including the *Bulletin,* are free. Blind job seekers may find a useful idea on interview techniques in JOB articles, or be encouraged to continue job hunting through hearing of the jobs found by other blind job seekers. Jobs also may be located by hearing of them directly in the Job Opportunities for the Blind job listing.

Interested persons may call a JOB contact person, who provides useful information, attend a free JOB seminar, or get good ideas from free JOB publications.

For information, contact: Lorraine Rovig, Director, Job Opportunities for the Blind, 1800 Johnson St., Baltimore, MD 21230; phone toll-free: 1-800-638-7518, or in Maryland phone: (301) 659-9314.

New Committee

Our NFB Diabetics Division has a new Heart Disease and Stroke committee. The man who chairs the committee has experienced heart disease and stroke due to diabetes, as do many long-term diabetics. He is ready, willing, and able to communicate with diabetics who are interested in the committee. Please feel free to contact: Ron Johnson, Chairman, 1229 McKinnley Drive, Ames, IA 50010; phone: (515) 232-1159.

Display Tables

This year's annual convention of the NFB will take place in New Orleans, Louisiana, Monday, July 1 through Saturday, July 6, 1991. At this momentous event our Diabetics Division has reserved space in the exhibit hall.

There will be hundreds of display tables with products and information that may be of interest to blind persons.

Our Diabetics Division will display literature and equipment that will be of interest to blind diabetics or to anyone interested in diabetes.

CAN YOU HELP? It takes many people to work the display tables, and if you can help for two hours, four hours, or more, please contact our display table chairman: Bill Parker, 857 Ingleside Road, Norfolk, VA 23502; phone: (804) 623-1638.

Bimonthly Classifieds

We have been asked to carry the following announcement:

"Bimonthly Classifieds for the Visually Impaired" is an audio cassette designed specifically to meet the advertising and shopping needs of the visually impaired. However, anyone, blind or sighted, can subscribe or place an ad.

Advertise a single item you would like to buy, sell or trade for just $1; ads of a personal nature are also $1. Advertise crafts, services or products for $2 each. Advertise the availability of your company's catalog for $3.

With an annual subscription fee of only $12, you should take advantage of this unique offer. Everyone is entitled to place a free ad within one year of subscribing.

After joining, you will receive a free gift each time a new subscriber lets us know they heard about *"Bimonthly Classifieds"* from you. There's no limit!

Subscribers are automatically entered in the Christmas cash drawing to be held each December 8th: first prize $100, second prize $50, and third prize $25.

To subscribe, make check or money order for $12 payable to Chilton and Company and mail to 4905 Park Avenue, Nashville, Tennessee 37209. Be sure to include your name, address and telephone number.

Ads and subscription information may be submitted in Braille, print or on cassette. If you have any questions, please contact Chilton and Company at (615) 385-9974.

Braille Calendars

The American Brotherhood for the Blind is offering, free-of-charge, an attractive 1991 calendar in Braille. Just write to the American Brotherhood for the Blind, 1800 Johnson St., Baltimore, MD 21230.

Q: Why did the bow-legged cowboy get fired?
A: Because he couldn't keep his calves together.

Q: What is the difference between a school teacher and a train?
A: The teacher says spit out your gum and the train says chew, chew, chew.

ADVERTISERS

Effective advertising doesn't scream at its audience. It persuades. It sells. The key to cost-effective advertising is making your voice heard where an audience is already listening. *Voice of the Diabetic* offers such an outlet. Make *your* voice heard. For advertising information contact:

Voice of the Diabetic
Ed Bryant, Editor
811 Cherry Street, Suite 306
Columbia, MO 65201
(314) 875-8911

Subscription/Membership

FREE **FREE**

One-year introductory free offer! The *Voice of the Diabetic* is a quarterly magazine published by the National Federation of the Blind (NFB) Diabetics Division for anyone interested in diabetes, especially diabetics who are blind or losing vision. It is an outreach publication emphasizing good diabetic control, diet, and independence. This one-year free offer is good now through Monday, July 15, 1991. This offer is only for new members and subscribers. It does not apply to renewals.

You may receive the *Voice* absolutely free for one year. Please check one of the following:

☐ I would like to receive the *Voice* for one year at no charge as a member of the NFB Diabetics Division. To renew at year's end, the cost will be $5.00 per year. (Members of our Division enjoy certain advantages, such as that should a side effect occur, they can be put in touch with others having a similar experience.)

☐ I would like to receive the *Voice* for one year at no charge as a non-member or institution. To renew at year's end, the cost will be $15.00 per year.

Send the *Voice* in (check one): ☐ print ☐ tape (for the blind, recorded at 15/16 IPS) ☐ both

Please fill out the following form (print clearly):

Name _____

Address _____

City _____ State _____ Zip _____

Telephone Number (_____) _____

Send this form or a facsimile to the editor by July 15, 1991:
Ed Bryant, 811 Cherry St., Suite 306, Columbia, MO 65201

Diabetics should take extra precautions when ill

Diabetics must take extras precautions if they catch a common cold or flu virus.

That's the word from Mary Andrulot, RN, certified diabetes educator at St. John's Regional Health Center in Springfield, Mo.

She said it is a good idea for diabetics to check with their doctors about medications to keep at home for vomiting or diarrhea. Loss of body fluids can dehydrate you severely. Over-the-counter medications may be taken — with exceptions.

The amount of sugar and/or alcohol in any dose of such a product will generally not be enough to cause a diabetic too many problems. But in some people, that extra sugar could be just enough to complicate blood glucose management. In such cases, health professionals recommend using sugar-free and alcohol-free cold remedies when treating symptoms.

She said when diabetics are too sick to eat, they should try the following program. Keep fluid intake up by drinking clear liquids (tea, soda, bouillon soup) and work your way to thicker liquids (milk, ice cream, cream soups). If you can tolerate these, slowly begin taking plain foods such as dry toast, cereal, crackers or potatoes. Orange juice and bananas are good sources of potassium which may be lost with diarrhea. Equal parts of weak tea, pear juice and ginger ale have helped some people with nausea.

(*Note:* This article appeared in the January 4, 1990 *Daily Quill,* West Plains, Mo.)